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R.A. Boynall

THE FAMILY DOCTOR

AN

ENCYCLOPÆDIA OF DOMESTIC MEDICINE

AND

HOUSEHOLD SURGERY.

VOL. I:—A. TO H.

THE

FAMILY DOCTOR

BEING A COMPLETE

ENCYCLOPÆDIA OF DOMESTIC MEDICINE AND HOUSEHOLD SURGERY

COMPRISING

A Full Description of the Human Frame

AN ACCOUNT OF THE NATURE AND TREATMENT OF ALL DISEASES;
OF THE DRUGS AND PREPARATIONS USED AS REMEDIAL AGENTS;
AND OF THE READIEST MEANS OF OBTAINING, PREPARING,
AND ADMINISTERING THEM.

THE WHOLE ARRANGED SO AS TO FACILITATE REFERENCE.
CLEARLY AND SIMPLY WRITTEN,

AND

ESPECIALLY ADAPTED FOR POPULAR USE.

BY A DISPENSARY SURGEON.

ILLUSTRATED WITH ALL THE MEDICINAL PLANTS, &c.

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PREFACE.

It is universally felt and acknowledged that much of our comfort and happiness depends upon the state and condition of this wondrous anatomy of ours. Greatly do "the ills which flesh is heir to" affect and influence our temporal interests. To be rightly informed, therefore, as to the construction of the Human Frame; the form and position of its various parts; the nature of its tissues and organs; their modes of growth and operation; and of the different functions, on the due performance of which depend the health and vigour of the whole system, should constitute a portion of our elementary education. Yet how few there are who take the slightest trouble to become acquainted with the mere outlines of anatomy, and the first principles of pathology, and *materia medica;* to obtain that "little learning" which is *not* a "dangerous thing;" to enable them to take the necessary precautions against disease; to make proper sanitary arrangements; and to resort at once to the best means and remedies in those emergencies which, from accident or sickness, are constantly arising.

It is the object of this work to supply the requisite amount of information, on the subject of diseases and their remedies, which it is desirable a non-professional person should obtain, and to do this in as simple and clear a manner as possible. The aim has been to produce a book that shall be in very truth "The Family Doctor," suitable for ready reference in all those numerous cases in which it is unnecessary or impossible to obtain the assistance of a Surgeon, or Physician, whose aid should ever be sought when there is really an occasion for it.

There is at present no lack of works professing to have the same object in view, but they are mostly large and costly, and do not come within the means of the many, to whom such information is useful; and, generally speaking, they are too professional and technical to be of much service to the large class for whom we write, even if they were not too expensive to be purchased. Our aim is utility, in its widest signification. We write for the million, and we desire to make our manual a household book in the cottage of the labourer, the home of the artizan, as well as in the residence of the middle-class tradesman; therefore we write simply, and explain as we go, troubling our readers as little as may be with hard scientific names, and where *obliged* to do this, pointing out the meaning of them in the plainest terms.

It is believed that the information conveyed in these pages is thoroughly practical, and such as may be depended on; it is the result of much study and research; the author not relying on his own experience simply, but consulting the most recent and eminent authorities; so as to give a complete digest, and compendium of the present advanced state of medical, surgical, and sanitary science. His task, thus far, has been a pleasant one, because he feels assured that his labours must result in benefit to his fellow-creatures; and he flatters himself that they are appreciated, by the large sale which the work has already attained, and by the numerous expressions of commendation which he has received from various quarters.

TO

HENRY LETHEBY, M.B., F.S.A.,

PROFESSOR OF CHEMISTRY AND TOXICOLOGY

IN THE

MEDICAL COLLEGE OF THE LONDON HOSPITAL,

AND

CHIEF OFFICER OF HEALTH

TO THE

CORPORATION OF THE CITY OF LONDON,

This Work is Dedicated,

IN GRATEFUL ACKNOWLEDGMENT

OF HIS SERVICES TO

SANITARY SCIENCE.

THE FAMILY DOCTOR:

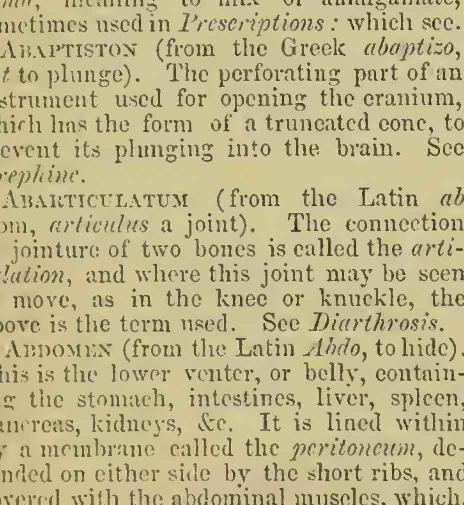
AN ENCYCLOPÆDIA OF DOMESTIC MEDICINE.

A. A. A. A chemical abbreviation of *amalgama*, meaning to mix or amalgamate, sometimes used in *Prescriptions:* which see.

Abaptiston (from the Greek *abaptizo*, not to plunge). The perforating part of an instrument used for opening the cranium, which has the form of a truncated cone, to prevent its plunging into the brain. See *Trephine*.

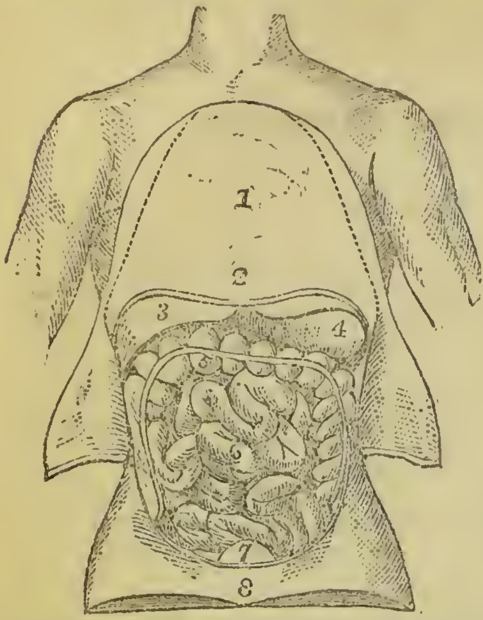
Abarticulatum (from the Latin *ab* from, *articulus* a joint). The connection or jointure of two bones is called the *articulation*, and where this joint may be seen to move, as in the knee or knuckle, the above is the term used. See *Diarthrosis*.

Abdomen (from the Latin *Abdo*, to hide). This is the lower venter, or belly, containing the stomach, intestines, liver, spleen, pancreas, kidneys, &c. It is lined within by a membrane called the *peritoneum*, defended on either side by the short ribs, and covered with the abdominal muscles, which, by their relaxations and contractions, in the act of breathing, assist digestion, and give the necessary secretive and expulsive motions to the surrounding parts. The abdomen is bounded above by the midriff or diaphragm, or, to speak more clearly and scientifically, by the *cartilago ensiformis;* and below by the pelvic bones, forming the pelvic cavity, with which it communicates; at the front and sides are the before mentioned abdominal muscles, which also extend backward to the vertebral column, or spine. This is the largest cavity of the human body, and, for convenience of description, it has been mapped out into three zones, upper, middle, and lower, and several parts, or regions. (See *diagram.*) That in the centre at the top is called the *epigastric* region (1); those on either side of it are the *hypochondriac* (4 5); next in the centre is the *umbilical* (2); right and left of which are the *iliac* (6, 7); below these are the *inguinal* (8, 9); and between them the *hypogastric* (3); forming the lower central division.



Some anatomists include in the abdominal regions the *inferior dorsal* and *lumbar*, which are at the back, corresponding in position with the two upper zones.

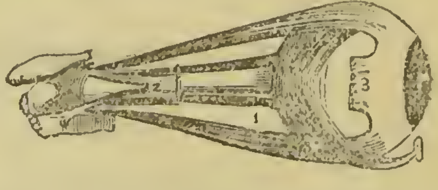
Contents of the Abdomen,—or, as they would be more properly called, the *abdominal viscera*, this word being the plural of *viscus*, which means a bowel or any internal organ which has a specific use—are thus situated. (See *diagram*). Below the chest (1), and next to the diaphragm (2), is the liver (3), extending from beneath the right ribs across to the left, and having the largest development on the former side. Next to this is the stomach (4), the smaller end of which is situated in the epigastric, and the larger in the left hypochondriac region, where it comes in contact with the spleen, or melt. Behind the stomach lies the pancreas, or sweetbread. In the middle zone lies the large bowel (5), the omentum or caul, with a portion of the small intestines (6); and behind these, close to the spine, are the kidneys. The small intestines also pass down the centre part of the inferior zone, as do laterally the ends of the large intestines, or colon; and there also we find, when it is distended, the upper portion of the bladder, (7). Over all these viscera, covering and supporting them, extends the moist glistening membrane called the *peritoneum*, which extends also into what is called, in the male, the *rectum*, in the female the *womb*. Some of the abdominal viscera are solid, as the liver; some hollow, as the intestines: and the sounds which they emit, when the abdomen is struck by the finger of the skilful physician, indicate to his trained ear, the state and condition of the organs within.



The situation of these viscera varies considerably with the changes in the position of the body, and a blow, a violent strain, or a sudden jerk, may cause a serious derangement of them; one of the most common accidents to which they are liable is what is called *hernia*, or *rupture*, of which we shall speak more fully under its proper head, as we shall of the liver and other organs, with the diseases to which they are liable, when we have to treat of them more especially.

ABDOMINOSCOPY (from the Latin *abdomen*, and the Greek *skopein* to view), means the examination of the abdomen with the view to detect disease. It is generally performed while the patient lies on the back, so as to leave the muscles relaxed. The hand of the examiner is passed carefully over the abdominal region, so that it may detect any abnormal or unnatural condition of the viscera, or parts adjacent.

ABDUCTOR and ADDUCTOR (from the Latin *ab* from, and *ad* to, and *duco* to draw). Muscles, whose office it is to draw one part to or from another. Connected with the eye are a pair of these muscles, by which the motions of the ball are effected; they are sometimes called the *internal* and *external recti*. In the accompanying diagram, 2 is the internal rectus, partly concealed by the optic nerve; 1, part of external rectus, showing its two heads of origin; 3, extremity of external rectus at its insertion.



ABELMOSCHUS—*Musk Seeds*. The produce of the *Hibiscus Abelmoschus*, growing in South America, and belonging to the natural order *Malvaceæ;* they have a strong odour of musk, and, like that substance, have stimulant and antispasmodic properties. They are sometimes used as a remedy for the bite of serpents. The only form of administration in this country is the *Tinctura Abelmoschi*, dose half a drachm to a drachm and a half, recommended with alkalines and tonics for indigestion, nervousness, and gout.

ABERRATION (from the Latin *aberro*, to wander,) a wandering or unnatural state of the mind. See *Lunacy*, *Madness*.

ABIES is the botanical name for the Firs, a genus of trees of the coniferous tribe, from several species of which are obtained gums and other substances used medicinally. See *Burgundy Pitch*, *Canada Balsam*, *Frankincense*, *Spruce*.

ABLACTATION (from the Latin *ab*, from, and *lac* milk). See *Suckling*, *Weaning*.

ABLEPSIA, ABLEPSIS, or ABLEPSY (from the Greek *ab*, and *blepo* to see), a deprivation of sight. See *Blindness*.

ABLUENT (from the Latin *abluo* to wash away). A term formerly applied to medicines used for purifying the blood. See *Detergent*.

ABLUTION (from the Latin *ablutio*, a washing or purifying). No person who has a due regard for health will neglect that which is so essential to its preservation, viz., personal cleanliness. In this country, ablution, or washing of the body, is not nearly so frequent as it ought to be, especially among the operative classes by whom it is most needed. It is necessary to the proper performance of the functions of the internal organs, that a certain amount of waste matter, so to speak, should be thrown off through the pores of the skin; and unless these are kept free from dirt and other impurities, much of this matter must be retained in the system, to be got rid of by some other less natural means, or to remain and lay the foundation of various diseases of a very troublesome and painful character. Among these may be mentioned *gout* and *gravel*. It has been said that "cleanliness is next to godliness," and certain it is that no one who entertains a proper sense of what is due to himself, his neighbour, and his Maker, will neglect this important duty. Languor, headache, loss of appetite, and general debility, is often the result of such neglect, and neither religious nor secular duties are likely to be well performed when this is the case; few have sufficient strength of mind—call it philosophy or what you will—to struggle with and overcome the feelings of peevishness and discontent, and disinclination to active exertion, which accompany an ill state of health; and it behoves all, in whatsoever station they may be placed, to neglect no means necessary to keep this wonderful anatomy of ours in proper working order.

As to the *times* and *seasons* when ablution may be performed with the greatest advantage, this must depend much upon individual constitution and circumstances. As a general rule, the whole surface of the body should be cleansed at least once a week, with soap and water; good strong yellow soap is the best to use, and rain water, when it can be procured fresh and clean. Washing with simple water should also be resorted to once a day, either at night or morning, followed up in all cases by rubbing with a rough towel or a flesh brush, to restore the animal heat carried off in the process of rapid evaporation. Those in robust health should use cold water throughout the year; delicate persons may have it tepid in winter. When the feet only are washed, the water should always be slightly warm. In some cases ablution of the whole body produces heart-burn and other distressing symptoms; in such, partial washing should be practised, or if this cannot be borne, dry rubbing with a towel or brush. For children and aged persons *regular* and *thorough* washing is especially necessary; in the former cases to strengthen the system, and in the latter to stimulate to healthy action the vital functions. In both these cases it is best to avoid a chill by using tepid water. For further particulars on this head, see *Bathing*, *Washing*, *&c*.

ABORTION (Latin *ab* from, *ortus* birth). The premature expulsion of the fœtus from the womb, that is before the seventh month; after that period, if delivery occurs before the ninth month, it is called premature labour.

Causes. Abortion, or miscarriage, as it is more commonly termed, may proceed from various causes, such as a sudden shock to the system by a fall or a fright, straining or over-reaching; the administration of strong purgatives or emetics, excessive indulgence in venery, or aught which may tend to debilitate the system; malformation of the generative organs; fevers and severe inflammations; syphilis or constitutional disease of any kind; the growth of polypi or tumours in the cavity of the uterus, or adhesion to the surrounding viscera; too great contractibility of the uterine fibres, and blood vessels: most frequently, perhaps, it is a diseased condition of the fœtus itself, which wanting the elements of growth and vitality, is rejected as a useless and troublesome incumbrance. Two classes of females, very different in constitution and appearance, are more than commonly liable to abortion, viz., those of a voluptuous and plethoric habit, and those of a weak and irritable frame. For obvious reasons it is more common for women of the lower orders to miscarry than those of the middle and upper classes; those who continue to suckle after conception has again taken place, render themselves liable to it, because a certain amount of nutriment required by the fœtus, goes to the formation of the acteal fluid.

Effects. Miscarriage is generally attended with much pain; it weakens the system, and often severely tries the constitution of the sufferer, whose liability to the accident increases with each occurrence. The periods at which it is most likely to take place, are said to be about a month after conception, again in twelve weeks, and again in the seventh month, the liability increasing in those stages which correspond with the periods of menstruation. Some females invariably miscarry at a certain stage, and thus although often in the way to become [parents, are never blessed with offspring.

By this it will be sufficiently plain that pregnant women ought to avoid all violent exercises of the body, strong mental excitement, over indulgence of sensual appetites, exposure to wet, or any extremes of weather, or aught which may tend to constitutional derangement of whatever kind; and those who have once aborted should be doubly careful on account of their greater liability.

Symptoms of miscarriage vary considerably according to the more or less advanced stage of pregnancy, and state and condition of the patient; but usually she feels at first slight pains in the loins, and parts about the womb; there is a sense of bearing down, a frequent desire to make water, or to evacuate the bowels, and a feverish state of the system generally. A discharge of blood commonly follows, sometimes in clots, at others in gushes, in longer or shorter intervals; and this will continue until the fœtus is expelled. As the patient cannot be considered out of danger, until relieved of the ovum, the discharge ought to be carefully watched, and preserved for the examination of the medical man, should he not be present during its progress, which is much to be be preferred.

Treatment. The first object, when the premonitory symptoms above mentioned set in, is if possible to *prevent* abortion; to this end the patient should at once assume a recumbent position, and on no account be suffered to move more than may be absolutely necessary; if she is of a plethoric habit, and complains of a sense of fulness, and especially if there be a strong quick pulse, and febrile symptoms, from eight to twelve leeches may be applied to the lower part of the stomach, (Buchan says, "that sanguine and robust women who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives,") and salines administered, such as the common effervescing draughts of soda and tartaric acid; or if an aperient is required, seidlitz powders with cold clysters to assist the action, if necessary. If there is much heat in the abdomen, cloths wet with vinegar and water in equal proportions should be applied thereto, and removed as often as they get warm. When the hæmorrhage becomes at all profuse, all hopes of prevention are at an end, and the efforts should be directed to relieve pain, prevent utter exhaustion of strength, and finally to remove as quickly as may be, the ovum from the womb; to effect the latter object, mechanical means are sometimes resorted to, but only one thoroughly acquainted with the anatomy of the parts should attempt this. As the flooding proceeds, the patient should be kept as cool as possible; she should be exposed to, and suffered to breathe, cold air; acidulated drinks should be administered; if ice can be obtained let it be used to lower their temperature. Should fainting ensue from loss of blood, cordials may be given, but not hastily, or frequently; a tea spoonful of brandy, or fifteen drops of Aromatic Spirits of Ammonia, in half a wine-glassful of cold water, is the best stimulant for the purpose. When the discharge is very profuse, lint, wadding, or a piece of sponge, dipped in a Solution of Alum, and then in Olive Oil, may be introduced into the vagina, or an injection of the same gently thrown up by means of a syringe; or a decoction of Oak Bark may be used for the same purpose.

Should these means fail to check the hæmorrhage, make up eighteen grains of Sugar of Lead into twelve pills, with crumb of bread, and give one every two hours, with a draught of vinegar and water, or diluted Sulphuric Acid, fifteen drops in half a wine-glass of water being a sufficient dose. Opiates may be given with advantage when the pain is *very* severe, especially before the flooding comes on, or after it has continued too long; *suppositories*, consisting of about a grain of powdered opium, made up into a softish mass, with a few grains of powdered Gum, or Extract of Henbane, are also useful; these latter may be introduced when miscarriage is likely to ensue; with rest and proper care they will sometimes prevent it.

We can say nothing here about abortions voluntarily produced, except to warn females of the folly and danger of resorting to unprincipled empirics, or the use of powerful drugs, to hide the consequences of an unlawful gratification of their passions. Death has frequently resulted from the employment of such means as are necessary to produce abortion, and far better is it to bear the shame and disgrace of being the mother of illegitimate offspring, than incur the risk and sin of being possibly a destroyer of self, as well as of the embryo of a human being, over which the parental instinct alone ought to stimulate to tender care and watchfulness.

ABRASION (from the Latin *abrado* to shave off), a mechanical removal of the outer or scarf-skin, commonly called a *graze*. This, although but a trifling injury is often painful and difficult to heal, especially if it occurs on parts exposed to much friction or contact with hot, or otherwise, irritating fluids. The cuticle soon grows again if the part is kept quiet and protected from injury; collodion and glycerine applied with a camel hair brush are both useful in this case, but as they cause considerable smarting, it is best to cover the part first with a piece of gold-beater's skin. Should the abraded surface be large, lint or linen rag spread over with zinc ointment, or saturated with zinc or goulard lotion, should be applied. See *Chafing*, *Cuticle*, *Epidermis*, *Excoriation*, *Skin*.

ABSCESS (from the Latin *abscedo* to depart). A collection of pus, or purulent matter, in a cyst or cavity formed in any of the tissues of the body. *Causes and Consequences.* Inflammatory action of the adhesive kind, induced by a blow or prick, or the introduction of something poisonous or otherwise irritating. The cells of the membrane become filled with adhesive matter, a mere drop at first, but as ulceration proceeds, this increases in quantity, the surrounding parts are gradually absorbed, the solids converted into a fluid state; more active inflammation is set up, causing acute pain, restlessness, loss of appetite, and, of consequence, great constitutional derangement Happily, for the chance of eventual cure, the absorption does not proceed with equal rapidity on all sides, but has a tendency towards the surface of the body, and by this we learn that matter has no eroding property—does not act, like an acid or caustic alkali, chemically or mechanically upon the tissues, as at one time supposed.

In the above paragraph we note some of the *immediate* consequences; among those more remote and permanent, may be mentioned a general weakening of the system, and often lasting injury to the parts affected.

Abscesses are of two kinds, *acute* and *chronic;* the former may last from three to six weeks, beginning to discharge usually at the end of the first period; the latter, which is commonly seated in some internal part, such as the liver, may continue for several months, its duration depending very much upon the remedial means resorted to, situation, constitution of the patient, &c.

Symptoms and Treatment. Heat and tenderness of the part affected is the premonitory symptom of an acute abscess; it is commonly confined at first to a small spot, which becomes red, and painful to the touch: very soon a distinct throbbing, may be felt, which is a sure indication of the formation of matter; then the part begins to swell, and the skin exhibits a shiny, semi-transparent appearance, sometimes being tinged with purple; this becomes more marked and decided as the tension increases, with the increase of the matter beneath, until it gives way of itself or is opened by some sharp instrument, and the pus flows out, at first of a cream-like colour and consistence, often turgid and streaked with blood; thus it continues for a week or more, then gradually becomes clearer and thinner, until it is quite watery, or ceases altogether. During this process, before the matter has found a channel of escape, the pain becomes more and more acute, until it is almost unbearable, giving the patient no rest day nor night; then ensues the constitutional derangement spoken of under the head of consequences, and often febrile symptoms, which must be relieved by means of cooling aperients.

Fomentation with water as hot as it can be borne, and hot bread or linseed poultices, should be resorted to in the first stages of an acute abscess: strong drawing and irritating applications are often made use of, but this only increases the anguish without doing good: indeed it is both cruel and hurtful. The poultices should be frequently changed in order to keep up the requisite degree of warmth; they should be carefully adjusted so as not to press unduly upon the tenderest part, and when the pain is very severe, poppy heads should be boiled in the water with which they are mixed, and this poppy decoction should also be be used for the fomentations. If, as is often the case, the abscess should be in the hand or lower part of the arm, that limb should be supported by a sling made of a silk handkerchief, or some other soft material, so as to keep it from hanging down: adjust it so as to have the upper part of the arm as nearly perpendicular as may be, and the bend of the elbow at right angles with it. To keep the system cool and allay the fever which generally more or less attends active inflammation, the patient should take, every other night or so, an aperient pill, composed of Compound Extract of Colocynth, 4 grains; Calomel, 1 grain; and two or three times a-day, a tablespoonful of the following mixture:—Sulphate of Magnesia, ½ an ounce; Carbonate of Magnesia, 1 drachm; Wine of Tartarized Antimony, 2 grains; Camphor Mixture, 6 ounces: should this mixture cause griping in the bowels, add thirty drops of Essence of Peppermint; if it acts too violently, reduce the quantity of Sulphate of Magnesia to one-half, and take a pill every third night only. When the anguish prevents rest at night, this draught may be taken at bed-time — Acetate of Morphine, ¼ of a grain; Liquor of Acetate of Ammonia, 1 drachm; Camphor Mixture, 7 drachms.

After the discharge of purulent matter has ceased, the poultices may be discontinued, and moist rags kept applied for some days, after which the edges of the wound may be drawn together by strips of adhesive plaister, over which it is best to place a dressing of Turner's Cerate or Spermaceti Ointment. If the wound is deep and large, it may be some weeks before it fills by granulation, but otherwise the healing process proceeds rapidly, unless there is a want of vital energy in the system, or a diseased state of the part immediately affected; in this case bad sloughing ulcers result, which are very difficult to heal, for their treatment, see *Ulcers.*

A medical man will generally open an abscess, when it is sufficiently ripe, rather than wait the slower process of the breaking of the skin, and by doing this he often saves the patient much suffering and constitutional derangement; but no person unacquainted with the anatomy of the part should attempt this; to do it effectually the cut should be bold and deep, and exactly in the right place; an unpractised hand will probably leave the largest reservoir of matter untouched, and so render another incision necessary, and effect no good purpose by the pain inflicted. Where the integument which covers the seat of the abscess is hard and thick, it is nearly always necesary to open it, and only the skilled practitioner can judge of the proper time for doing this; therefore his aid should in all such cases be solicited; as in those of deeply seated and internal abscesses, which generally assume a *chronic* character. With regard to the treatment of these no specific directions can be given, it must depend much upon the character of the tissues which they affect; as a general rule, the patient's strength must be supported by a good and generous diet, and the administration of tonic and cordial medicines, taking care to keep the bowels moderately open. Stimulating plaisters made of Burgundy pitch, Gum Ammoniae with Mercury or Galbanum, are applied with advantage to the abdomen, or other seat of the affection, as are poultices of oatmeal with vinegar, or yeast, or water impregnated with salt. For abscesses in the neck, Astley Cooper recommends incision with a sharp knife, pressing the matter well out so as to excite adhesive inflammation, and dressing the wound with bread poultices moistened first with Sulphate of Zinc in solution, and afterwards with Spirits of Wine, giving good light nourishment, and carefully regulating the bowels.

For the relief of the hectic fever, night sweats, and other constitutional disturbances, caused by both acute and chronic abscesses, but more especially the latter, preparations of bark or iron, mineral acids, or cod-liver oil may be given during the period of copious discharge; and especially immediately after it, when the powers of nature are most sorely taxed to supply the waste, and reconstruct the destroyed tissues, is nourishing food and strengthening medicine required.

Internal abscesses have been variously denominated according to their seat, as *empyema*, when in the cavity of the pleura, *vomica* when seated in the lungs; *panaris* or *whitlow* when in any of the fingers; *hypossium* when in the interior chamber of the eye; *arthropyosis* when in a joint; and *psoas* or *lumbar* when in the loins.

Under the head of abscesses might be classed *Boils*, *Small-pox*, (every pustule being a little abscess,) and several other forms of eruptive and other disease, but all these will be spoken of in their proper alphabetical order; we now, therefore, merely refer to them as in some degree connected with our present subject, as are also *Consumption*, *Hectic Fever*, *Pleurisy*, *Poultices*, *Pus*, *Suppuration*, *and Water-dressing*.

ABSCISION (from the Latin *ab* from, *scissio* to cut). Used in surgery to denote the cutting away of some dead or useless part with an edged instrument. Employed by old medical writers to express the sudden termination by death of a person, before disease had begun to decline.

ABSINTHIN, a new resin discovered in Wormwood by the German chemist, Kunsmuller, it is intensely bitter, but its properties as a remedial agent have not as yet been much tested.

ABSINTHIUM (from the Greek *absinthus*, from or by pleasure). See *Artemisia*, *Wormwood.*

ABSORBENTS (from the Latin *absorbeo* to suck up). There are two distinct sets of minute vessels distributed throughout the frame whose office it is to absorb and convey fluids into the thoracic duct, or to speak more plainly, into the channel of the general circulation. These are called :—

1st. *Lacteals*, which take up the *chyle* or nutritious portion of the food from the alimentary canal; they are delicate transparent tubes, having valves like the veins. After leaving the stomach laden with the milky looking chyle, they unite in one common trunk, and pass up the front of the spine, between the folds of the *mesentery*, where being knotted or twisted together, they are improperly called the *mesenteric glands*. Above this, still increasing in bulk as they proceed, they join the larger veins, communicating directly with the heart.

2nd. *Lymphatics*, which pervade almost every part of the body, from whence they convey a fluid called *lymph*, containing whatever nutrient matter is fit to re-enter into the circulation. These, which in size and appearance closely resemble the lacteals, also assume, at places, a glandular form, doing so principally in the neck, under the armpits, in the groins, and insides of the thighs, where we have them spoken of as *lymphatic glands*. They are very liable to enlargement and inflammation, and will sometimes suppurate and produce wounds painful and difficult to heal; especially is this the case in weak and scrofulous persons. The cause of suppuration is often a sore with which the lymphatics have come in contact, and when this is the case it is useless to heal the effect while the *cause* remains; this must be first sought out and cured. "Waxen Kernels," "Kernels of the Neck," are names commonly given to these enlarged glands, to reduce which, and prevent suppuration, the system should be strengthened with nourishing food and tonics, regular exercise, sea bathing, and change of air. Preparations of Iron, Iodide of Potassium, with bitter infusions will be found useful, and also Cod-liver Oil, with plenty of Milk, Port-wine, Porter, &c. For local application before suppuration ensues, paint the glands over with strong Tincture of Iodine about every other day; when suppuration has ensued, proceed the same as with an abscess. See *Glands*, *Mesentery*, *Scrofula*, *Tubes*, *&c.*

ABSORBENT MEDICINES. See *Anti-acids.*

ABSORPTION. This process is performed not only by the vessels above described, but, to a certain extent, by the blood vessels also, and even by the pores of the skin; thus nutriment in a liquid form, has been introduced into the system of one incapable of swallowing; and shipwrecked mariners, who could not obtain fresh water, have, by wrapping round their bodies clothes saturated with salt water, been in some degree relieved of their dreadful thirst. Remedial agents are sometimes administered by friction or rubbing in, or by applying them to an ulcerated surface produced by a blister, this is *cutaneous absorption*, which may be effected by means also of medicated baths. So may deleterious matter be introduced into the system through the pores of the skin; and, as in the old fable, a poisoned shirt be made the instrument of death and vengeance. In the bites of serpents, and other venomous creatures, of mad dogs, &c., the poison passes immediately into the circulation through the veins. See *Poisons*.

ABSTERGENT (from the Latin *abstergeo* to cleanse). Formerly applied to lotions or other applications for cleansing sores; sometimes called *abstersives*. When applied to suppurating surfaces it is more usual to call them *detersives*.

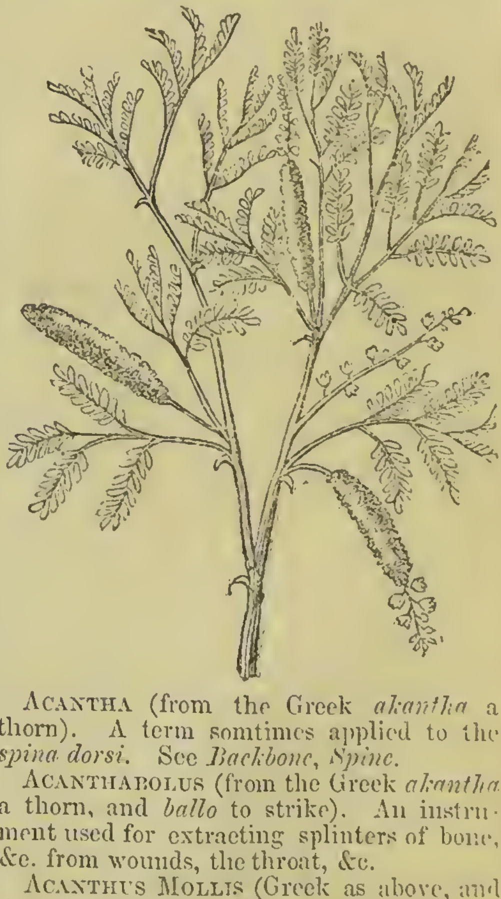
ABSTINENCE (from the Latin *abstineo*, to abstain) means here, excessive privation of food; it may be either *voluntary* or *involuntary*, in the former case proceeding from a diseased condition of the mind, such as is common in some forms of *mania;* sometimes carried to the extent of death by starvation, but not often, as the natural appetite for food prevails over the determination of the patient to abstain from it; and by the use of the stomach-pump, food can, in most cases, be conveyed down the gullet of the most violent maniac or determined suicide. In the treatment of disease, partial abstinence from food enters, at times, into the plans of all physicians, and forms part of their dietary arrangements, and in this case, it may be called voluntary. Not so, however, is it with shipwrecked mariners and others, placed in situations where food cannot be obtained; or, as is sometimes the case, where contractions of the gullet prevents the passage of nutriment to the alimentary canal. See *Œsophagus*, *Gullet.*

It is necessary, after extreme abstinence, to be very careful in the administration of food, as the weak state of the stomach renders it incapable of retaining much at once; then, little and often, must be the plan of operation; a few tablespoonsful of good soup every half-hour or so, or milk thickened with bread, and a little brandy. Sometimes an opiate is required to allay the feeling of sickness, and in this case a few drops of solution of Morphine in Camphor Mixture is good. (See *Starvation.*)

Abstinence is frequently practised on religious grounds, with the view of mortifying the body, and sometimes indeed to a very mischievous extent. A full and regular supply of good nourishing food is necessary to some constitutions, and there is no greater mistake than that often committed by persons of weak digestive powers, who fancy that the less they give the stomach to do the better, and, therefore, half starve themselves; by this means they permanently lower the tone of the whole system, and yet more weaken those very organs which are already too weak. See *Diet*, *Digestion*, *Regimen.*

ACACIA (from the Greek *akazo*, to sharpen), a genus of trees or shrubs belonging to the natural order *Leguminosæ*, or Pea-tribe, mostly bearing sharp spines. Those from which we derive the Gum Acacia, or Gum Arabic of commerce are *A. Vera*, (see *cut*) *A. Arabica*, and *A. Senegalensis;* they are natives of the East, being found most plentifully in Egypt, Turkey, and Arabia.

ACACIA GUM, or GUM ARABIC, is used medicinally, chiefly in diseases of the lungs and kidneys, or in intestinal or other disorders, which produce irritation of the internal passages, which, on account of its demulcent properties, it soothes and protects. This gum is white or yellowish in colour, transparent, unless full of little cracks, which render it opaque; brittle, and easily soluble in warm water: the Senegal gum is the darkest in colour, and most impure; it is not so much used for medicinal purposes as the Arabian and Turkey gums. The officinal preparations of which they form the chief ingredient, are,—*Mistura Acacia*, or Mucilage, of which the dose is from 2 to 8 drachms. *Emulsio Acacia*, or Gum Emulsion, and *Syrupus Acacia*, both good in bronchial affections, and may be taken *ad libitum.* There is also a Gum Lozenge, *Pasta or Trochisci Acacia*, which is very pleasant and beneficial in all cases in which it is desirable to administer the gum. *Pulvis* (Powdered) *Acacia*, is a good application for burns and excoriated parts, forming a crust over, and so protecting them from the atmosphere; mixed with powdered resin it is sometimes used with good effect as a *styptic.*



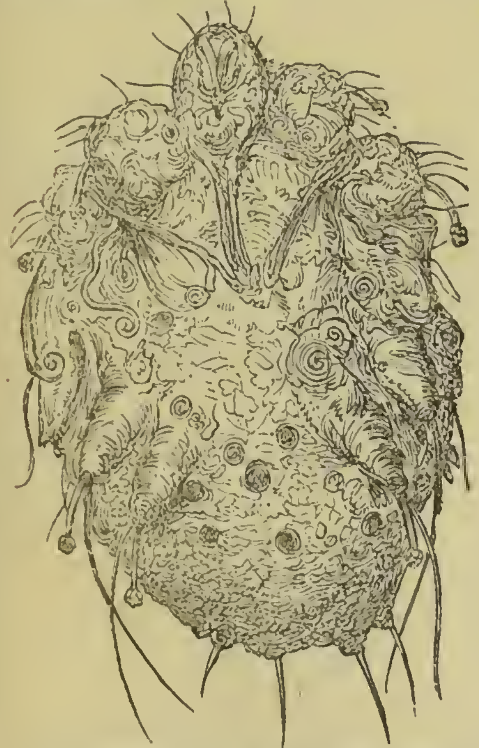
ACANTHA (from the Greek *akantha* a thorn). A term somtimes applied to the *spina dorsi.* See *Backbone*, *Spine.*

ACANTHABOLUS (from the Greek *akantha* a thorn, and *ballo* to strike). An instrument used for extracting splinters of bone, &c. from wounds, the throat, &c.

ACANTHUS MOLLIS (Greek as above, and Latin *mollis* soft), a plant called the Smooth

Bear's breech; formerly much used as a *diuretic.*

ACARUS (from the Greek *a* without, *kare* the head,) a minute animal found in the pustules of the itch; this particular kind is called *acarus scabies.*



Other *acari*, such as ticks and lice, are found upon the head and body, sometimes, notwithstanding the greatest care; but, most frequently, they are the result of uncleanly habits. Where there are cutaneous eruptions and sores it is a most difficult matter to get rid of them. The parts should be frequently washed, and a lotion consisting of Sal Volatile, or Spirits of Hartshorn and water, equal parts, applied after each washing. See *Itch*, *Lice*, *Scabies.*

ACATOPSIS (from the Greek *akataposis*, *not* to swallow). Inability to swallow liquids. See *Hydrophobia.*

ACCELERATION (from the Latin *accelero*, to hasten,) refers, in medical phraseology, to increased rapidity of action—it may be of the *Pulse*, or of *Respiration*, which see; also *Fever.*

ACCELERATOR (from *accelero* to hasten), a muscle which contracts to expel the urine. See *Muscles.*

ACCESSION (from the Latin *accedo*, to approach), is used to signify the near approach, or commencement of the pyrexial, or burning period of fever.

ACCIDENTS (from the Latin *accidens*) are those unforeseen events which are of such frequent occurrence, and by which we sustain bodily injury, more or less severe, resulting oftentimes in death; they cannot be entirely guarded against, else might man ensure a much more certain term of existence than he can with his present liability to them; in many cases they are the predisposing, if not the immediate, causes of disease, and affect the average duration of life in a greater degree than is at all evident to the mere statistical inquirer. But, although we cannot prevent accidents, yet may we, with a little ordinary prudence, lessen the chance of their occurrence, and an observance of the following simple rules may assist us to do so.

1. Be very cautious when on the water, or in its vicinity; more sudden deaths occur by drowning, and more diseases originate from colds caught by immersion and exposure in wet habiliments, than perhaps from all other causes put together; therefore be careful, if in a boat, to remain still, and so as not to destroy the equilibrium of yourself or the boat; be cautious of hoisting a sail in squally weather, and give a wide berth to any advancing vessel. Step not from one unsteady boat to another, or on to a floating pier, nor walk across a narrow plank, without securing good hold on some support. When on land, step not too near the brink of a lake or river; it may be loose and crumbly, or a sudden gust of wind may cause you to lose your balance. When bathing, beware of holes and eddies in the current, especially if you cannot swim; do not venture beyond your depth in the latter case without such support as corks or bladders, and in no case attempt to bathe when in a heated state, or immediately after a full meal See *Bathing*, *Drowning*, *Asphyxia.*

2. Do not stand beneath a tree in a thunder-storm, or by an iron palisade or spout, whether of iron, zinc, or lead; go not very

near lightning conductors, tall chimneys, or lofty erections of any kind; if in the house, keep away from the fire-place, looking-glasses, and windows, whether open or shut, as well as from doorways through which the electric fluid might escape, if it entered by the chimney: a bed in the middle of the room is the safest place, as blankets and sheets are non-conductors. See *Lightning.*

3. Loaded fire-arms should be put in safe places, out of the reach of children; never play with them, and pretend to fire them at any one. Do not keep guns or pistols loaded at all, unless you have some particular occasion for it. When carrying a gun let the muzzle be always pointed towards the ground, and, if you have occasion to pass it through a hedge or fence, look that there is no one in line with the barrel in the direction in which it points. Do not overload a piece, nor fire it with a foul barrel. Be very careful of gunpowder, and by no means smoke a pipe or segar when you have much about or near you. See *Burns.*

4. Do not sleep near lime-kilns, nor lay by burning charcoal; if drowsiness should come on while in such situations, leave them, and go out into the fresh air. See *Suffocation.*

5. In felling trees keep out of the line in which they are likely to fall, and, before cutting them through, have ropes fixed to the upper part of the trunk, that you may bring them down in the safest direction.

6. In severe weather, if obliged to be exposed to the cold, do not lie down to sleep, although you may feel an inclination to do so. Keep moving about while you have the power, and apply friction to the numbed parts of the body; take up some snow in the hands, and rub them well together. When in a partially frozen condition, you have an opportunity of approaching a fire, do not so too hastily, but get into a higher temperature by degrees. See *Freezing.*

7. Beware of damp beds, and of clothes damp with perspiration, especially of sitting in them in a cold atmosphere, or in a draught of air from an open window. Clothes from the wash should always be well aired, and such as have been long out of wear, especially if kept in a room without a fire. Beware also of new buildings, of which the walls are not sufficiently dry; if they "sweat," as it is technically called, they are unfit for habitation. See *Damp.*

8. Go not into vaults or cellars that have been long closed, or wells, or other confined places, until you have introduced a lighted candle therein; if the flame burns brightly, you may be sure there is no excess of carbonic acid gas; if it goes out, or burns dimly, the air is unfit to breathe, throw in some lime-water to neutralize the carbonic acid, and introduce fresh air as soon as possible.

9. Let all horses, draught or saddle, be secured before leaving them, and beware of vicious horses, some of which will bite as well as kick. Be cautious of an animal whose disposition and qualities you do not know. Bulls and boars are uncertain, and dangerous, and strange dogs are not to be trusted; the bite, and even the scratch of a cat has resulted fatally. See *Hydrophobia.*

10. In nurseries and other places where there are children, always keep iron guards before the fires; and even then, do not leave the children by themselves, on account of their well-known propensity to play with fire. For the same reason leave them not alone with lamps or lighted candles, and put lucifer matches out of their reach, and also kettles, or any vessels containing very hot water. See *Burns and Scalds.*

11. Never allow open candles to be carried about the house by servants or children; and if a rush or other light is burned in the night, place it so that the flame could not, were it to fall aside, come in contact with any combustible materials. Turn off singly the taps of all gas-burners, and also, if the light be not wanted through the night, the larger tap at the main. If you smell an escape of gas, do not approach the place where it is likely to be taking place with a lighted candle until plenty of air has been admitted.

12. Put a label with the word POISON on all bottles and packets containing corrosive or other preparations of a hurtful character; and even when so labelled, do not let them be about in the way of children or ignorant persons. If there is occasion to place rat or beetle poison in the house, let it be in out-of-the-way places, and be careful to take it up and destroy it in a short time, should it not be taken by the animals it is designed to destroy. See *Poisons.*

Many other cautions might be given. We might speak of leaving trap and other doors open, and wells uncovered; of leaning too far out of windows; of chopping and sawing wood, and using edged tools of any kind in a careless manner; but it is scarcely necessary to occupy our space by mentioning these, although they all contribute to swell the chapter of accidents which forms part of the history of every life.

ACCIDENTAL COLOURS. This name was given by Buffon to a series of optical phenomena, now called *Occula Spectra.* They have been classed by Darwin under two heads, *direct* and *reverse*, the former depending upon permanence of impression; the latter being the result of want of power in the retina to retain the impression which is produced by directing the eye steadily for a considerable time upon some dark object upon a white ground, or *vice versa;* on turning away, a well defined impression of the object will be perceived, with the colours reversed. See *Eye*, *Optics*, *Sight*.

ACCLIMATION OR ACCLIMATIZATION, is the act of being inured or naturalized to any particular country or clime, where the air and other atmospheric influences are different from those to which one had been accustomed. See *Air*, *Climate*, *Respiration*.

ACCOUCHEMENT—ACCOUCHEUR (from the French for confinement, or lying-in). The act of, and the medical attendant at, confinement. See *Child-birth*, *Delivery*, *Labour*, *Travail*.

ACORIA (from the Greek, *a* not, and *korho*, to satisfy). Insatiable hunger produced by disease.

ACETABULUM (from the Latin *acetum*, vinegar,) a vinegar cruet. The cup-like cavity which receives the head of the *os femoris*, or thigh-bone. See *Bones*, *Thigh*.

Also a plant, called the sea navel-wort, a species of *tabularia*, of powerful diuretic properties, now but little used; dose, 1 to 2 drachms in wine. See *cut of plant*.

ACETATES (from the Latin *acetum*, vinegar). These are salts formed by a combination of acetic acid with earths, alkalies, and metallic oxides; they are extensively employed in medicine. The following are the principal of those included in our Pharmacopœias:—Acetate of Iron (*Ferri Acetas*) sometimes called Extract of Iron, formerly known as *Extractum Martis;* qualities,—tonic and astringent: use in dyspepsia, chlorosis, hysteria, and rhachitis; dose, 4 to 12 grains. 2. Acetate of Mercury (*Hydrargus Acetas*) or Acetated Quicksilver, antisyphilitic and alterative; used as a lotion in cutaneous eruptions, 2 grains to 2 ounces of rose-water; for internal administration, dose 1 grain in the form of pills. 3. Acetate of Lead (*Plumbi Acetas* or *Superacetas*), commonly called Sugar of Lead; astringent; in weak solutions, cooling and sedative; in strong, 1 to 6 drachms distilled water, stimulant: combined with opium useful in internal bleeding; dose, ½ grain to 1½ grains, with Opium ½ grain, made into a pill with crumb of bread; the lotion good for inflammations, burns, bruises; as an injection in gonorrhæal discharges. 4. Acetate of Potash (*Potassæ Acetas*), formerly called *Kali Acetatum;* mildly cathartic, diuretic, and deobstruent; given in febrile diseases, dropsies, icterus, and visceral obstructions; dose, one scruple to one drachm; if required to open the bowels, 2 to 3 drachms, in solution; sometimes known as Diuretic Salt.

ACETOMETER (from the Latin as above, and the Greek *metron* a measure,) an instrument for estimating the strength of vinegar.

ACETUM (from the Latin *acer* sour), Vinegar. This is of two kinds, common and distilled; the first white, and the latter brown, chiefly used for culinary purposes. *Acidum Aceticum*, and *A. Pyroligneum* (Acetic and Pyroligneous Acid), are the pharmaceutical names of the white vinegar, which is mostly derived from the destructive distillation of wood, hence the term *pyroligneus*, meaning fire and wood. Vinegar is extremely useful for a variety of purposes; it is refrigerent, antiseptic, astringent, and diuretic; and may be given with advantage in inflammatory fevers in doses of 1 to 4 drachms; the Simple Oxymel of the Pharmacopœia is prepared with honey and acetic acid; dose, from 1 to 3 drachms, in barley-water or linseed tea. See *Oxymel.*

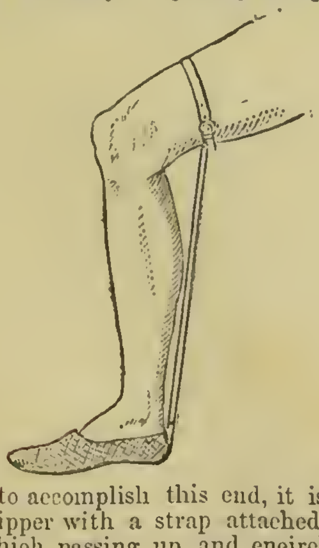
The Distilled Vinegar of the shops (*Aceticum Dilutum*) is but diluted acetic acid; *externally*, it is used as a discutant, styptic, and disinfectant, being scattered about sick rooms, hospital-wards, and the like. The strong acid is caustic and rubefacient; blotting paper, saturated with it, produces a blister speedily; with aromatics and camphor it has a stimulating and reviving effect, when the vapour is drawn up the nostrils; this is the Aromatic Vinegar (*Aceticum Aromaticum*) with which the sponges of the vinaigrettes are saturated. Camphorated Vinegar (*Acidum Aceticum Camphoratum*) may be used with advantage for this purpose, where there is danger of infection. The French prepare several perfumed vinegars, such as *Vinaigre de Cologne*, and the German dispensatories abound in medicated vinegars, which are chiefly used as preventives against pestilential diseases. Modern English practice has, in a great measure, discarded such preparations; the Vinegar of Meadow Saffron, and of Squills (*Acetum Colchici*, and *A. Scillæ*) are the only two which are much used. See *Colchicum* and *Squills.*

ACETOSELLA (*Sorrel*). The name of a genus of plants belonging to the natural order *Oxalidaceæa*, of which several species grow wild in this country, and are more or less acidulous. Medical botanists recommend them to be taken freely in febrile disorders, especially the Wood Sorrel (*Oxalis acetosella*), whose leaves yield the largest quantity of the peculiar acid salt, sold under the name of Salt of Sorrel, or Salt of Lemons, and much used for taking ink spots out of linen. *Oxalic Acid*, is also a produce of the sorrels, in which it is found in combination with potash, as it is also in several other vegetable as well as animal substances. This is a virulent poison. See *Acids*, *Poisons.*

The Salt of Lemons of the shops is not pure Salt of Sorrel, being mixed with Tartrate of Potash, commonly called Cream of Tartar, even this is to a certain extent poisonous, death having ensued from taking it in mistake; and chewing the leaves of the plant which contains the *Binoxalate of Potash*, as a chemist would call it, has proved fatal to children, although it has been estimated that the salt forms but 1 part in 500 of the living plant. We give here two cuts, 1, of the pretty little wood sorrel, and 2, of the common meadow sorrel (*Rumex Acetosella*), well known to every juvenile haunter of green meads, where it grows to the height of a foot and a-half, and puts forth halbert-shaped leaves, and a spike of dull red flowers.

ACHILLIS TENDO. *The Tendon Achilles.* According to the heathen mythology, when Thetis dipped her infant son Achilles, into the river Styx to make him invulnerable, she held him by the heel, and this part being kept from the water was not affected by its wondrous power. Paris, who knew this, when he afterwards fought with Achilles, directed his arrow there, and inflicted a death wound. In allusion to this fable, modern anatomists have given the above name to the great tendon which passes from the muscles of the calf down to the heel, upon which it acts with the whole force of those muscles. It sometimes happens that by a sudden jerk, or violent exertion, the tendon gets torn across, or ruptured, and great pain or lameness is the consequence.

Treatment. On the first occurrence of the accident, if swelling and inflammation ensues, apply three or four leeches, and encourage the bleeding for a time with warm fomentations, or a linseed poultice. Afterterwards resort to cooling lotions, such as the following:—Liquor of Acetate of Lead and Tincture of Opium, of each 2 drachms; common Vinegar, 1 ounce; Distilled Water, 15 ounces; keep lint or linen-rag wet with this lotion constantly applied. When the inflammation has subsided, if there be still swelling and stiffness, rub in night, and morning, this liniment,—Strong Liquor of Ammonia and Tincture of Opium, of each, 1 drachm; Spirits of Turpentine and Soap Linament, of each 1 ounce. If it is merely a *strain* of the tendon, a little rest and the above remedial measures will soon afford a cure; but if a positive *rupture*, there may be much difficulty in getting the parts to unite; to accomplish this end, it is best to use a slipper with a strap attached to the heel, which passing up, and encircling the thigh may be drawn tight and kept so, as in the accompanying cut. During the process of uniting, if the patient walk at all, it should be with a crutch; and after the cure has been effected, a high-heeled laced boot should be worn to protect the part. See *Strains*, *Tendons*.



ACHOR (from the Greek *achyron*, chaff). A name given to a small pointed pustule, which generally appears on the head, and contains a pale straw coloured matter, or serum, which on oozing out is succeeded by a thin brown or yellowish scab; for treatment, see *Favus*, *Herpes*, *Skin Disease*.

ACID (Latin *acidulus*) may be chemically described as a substance sour and sharp to the taste, that changes vegetable blue colours to red, and, in combination with an alkali, forms a salt. Acids are of two kinds—*vegetable* and *mineral*—both of which are used extensively as medicines. We will speak first of

THE VEGETABLE ACIDS, the principal of which are—

1. ABIETIC ACID (*A. Abietis*), an acid discovered in the resin of the *Pinus Abies*, or Spruce Fir; also the peculiar acid liquor, yielded, along with the essential oil, in distillation of the fresh branches or fruit of other species of Firs: formerly much given as a remedy for coughs.

2. ACERIC ACID (*A. Acericum*), found in the juice of the common Maple (*Acer Campestris*) in the state of Acetate of Lime. *Acerates* are salts found in the sap of the same plants.

3. ACETIC ACID, or *Vinegar* (already described under the head *Acetum*).

4. BENZOIC ACID (*A. Benzoic*, or *Flores Benzoes*), sometimes called Acid, or Flowers of Benjamine. (See *Benzoin.*) The form in which this acid is presented is that of white, shining, needle-like crystals, as light as flakes of snow, with an aromatic odour, and an acid taste: it dissolves readily in spirit of wine, but sparingly in water: it may be entirely evaporated by dry heat, and, if the temperature is raised very high, it will burst into a yellow flame. It is a good stimulant and expectorant, sometimes given in chronic bronchitis, or confirmed disease of the lungs, the *dose* varying from 5 grains to 3 drachms two or three times a-day: it enters into the composition of that old and still favourite cough medicine, Paregoric Elixir, the Compound Tincture of Camphor of the present Pharmacopœia, the Camphorated Tincture of Opium of the older ones. It is also in the Ammoniated Tincture of Opium of the Edinburgh College. See *Tinctures*.

5. CARBONIC ACID (*A. Carbonicum*). This is the gas which, when introduced into the stomach in effervescing draughts, is so invigorating and refreshing, and which, when inhaled in large quantities, as in the case of wells and other confined places, is so prejudicial to life. In the former case it is refrigerent and anti septic, checking vomiting, and allaying thirst and gastric irritations. Applied to the skin, it acts as a stimulant, and it is useful to promote suppuration in ulcers, and remove the unpleasant fœtor which attends a purulent discharge. It has been used as an injection into the rectum for cancerous ulcers and dysentery, and also into the uterus, for a diseased condition of that organ. Carbonic acid is an active ingredient in several officinal compounds. See *Aerated and Mineral Waters.*

6. CITRIC ACID (*A. Citricum*), which is prepared from lemon juice. It is in white semi-transparent crystals of a rhomboidal shape, soluble in twice their weight of cold, and half their weight of boiling water. This acid is refrigerent, antiphlogistic, and antiseptic in its effects. It is useful in fevers and inflammatory complaints; combined with carbonate of soda, it forms a good effervescing draught; dissolved in water, in the proportion of 1 drachm to a quart, may be employed as a substitute for lemon juice. The usual dose is from 10 grains to a scruple; 15 grains of it neutralizes 20 grains of the Bicarbonate of Soda. See *Tartaric Acid.*

7. GALLIC ACID (*A. Gallicum*), obtained from Galls, and, like them, powerfully astringent; given to stop inward bleedings and other discharges, and used in gargles, lotions, and injections. *Dose*—from 2 to 10 grains, as a general tonic and peptic. In chylous urine, it has been given in 20 grain doses three times a-day. It is in brownish-white crystals, semi-transparent, weighs light, and dissolves in spirit of wine or hot water; makes a good lotion for *Hæmorrhoides* or *Piles*, which see.

8. HYDROCYANIC or PRUSSIC ACID (*A. Hydrocyanicum*), a transparent colourless fluid, with a strong odour of bitter almonds: *effects*—sedative and anti-spasmodic, very useful in allaying mucus irritation, and so staying sickness; it lowers the action of the heart, and, if given in large doses, speedily causes death. It is useful in coughs of all kinds, especially those which occur in paroxysms like hooping-cough, but should be very carefully administered. The *dose* for an adult of what is called Scheele's acid, from the inventor, is one drop given in infusion of gentian, or almond emulsion. Of the diluted acid of the "London Pharmacopœia" three drops may be given, this being the proportionate difference of strength. If desirous of obtaining its full sedative effect, give it in plain water or camphor mixture. In the strength of one drachm of acid to eight ounces of water, it is a good lotion to allay itching in skin diseases. For symptoms of poisoning by prussic acid, and remedies to be resorted to, see *Poisons*.

9. LACTIC ACID, OR ACID OF MILK, (*A. Lacticum*). This is a preparation but very rarely used; it is said to increase the appetite and promote digestion, and has been recommended in *diabetes* (which see): dose from 2 to 10 grains several times a day. There is a medicated lozenge prepared with this acid (*Trochisci Acidi Lactici*) of which 10 may be taken in the day.

10. OXALIC ACID, OR ACID OF SUGAR (*A. Oxalicum*). This is in white shining crystals, not unlike Epsom salts; it is one of the most rapid and fatal poisons; is much used for various purposes of utility, but seldom given internally in this country, although on the Continent it is held in considerable repute as a refrigerent in some inflammatory conditions of mucus membranes; the dose is from ½ a grain to 1 grain. See *Salt of Sorrel*, and *Superoxalate of Potash*, *Poisons*.

11. PHOSPHORIC ACID, OR ACID OF PHOSPHORUS, (*A. Phosphoricum*). This is a refrigerent, and general tonic, not often used, although thought to be superior as such to the mineral acids. It is efficacious in quenching the thirst which generally attends diabetes, and may be employed with advantage where there are earthy deposits in the urine, *caries*, *ossification of the arteries*, or *exostosis*, (all of which see.) The dose of the diluted acid is from 20 to 40 minims.

12. SALICULOUS ACID (*A. Saliculosum*). This is quite a modern preparation, and has not yet come much into use; it is diuretic, irritant, and narcotic, and is chiefly efficacious in dropsical affections, especially those connected with heart-disease, where from the weakened state of the organs it would be dangerous to administer digitalis. It is usually given in the form of tincture, made by adding 1 drachm of acid to 1 ounce of proof spirit; or of syrup, made by adding 45 drops of tincture to 1 ounce of simple syrup. See *Salicine*.

13. TANIC ACID, OR TANIN, (*A. Tanicum*). This, like the Gallic acid, which it greatly resembles in appearance, is prepared from oak galls; it possesses the same properties, but is thought to be the most powerful astringent of the two, and is therefore

preferred for local application, such as gargles, lotions, and injections. See *Hæmorrhages*, *Piles*, *Ringworm*, *&c.*

14. TARTARIC ACID, (*A. Tartaricum*). Similar in its properties to Citric Acid; but thought to be more irritant; being the cheaper preparation, it is most commonly used in the composition of Seidlitz and other effervescing powders, and acid drinks.

MINERAL ACIDS. ARSENIOUS ACID, (*Acidum Arseniosum*). This is the common or white oxide of arsenic, purified by exposure to great heat, or, as it would be called, by sublimation. It is given in intermittent fevers, and other periodic diseases, but chiefly in obstinate diseases of the skin; the dose is from 1-16th to 1-8th of a grain, and, like all preparations of arsenic, its effects should be watched carefully; the most common form of administration is what is called Fowler's Solution (*Liquor Potassæ Arsenitis*) where it is in combination with potash; this is given in doses varying from 3 to 15 minims. See *Arsenic*.

2. HYDROCHLORIC, OR MURIATIC ACID. (*Acidum Hydrochloricum*). This is prepared from chloride of sodium, or common salt, in combination with sulphuric acid. It has tonic, antiseptic, and diuretic properties. It is given in bitter infusions, to strengthen and restore the tone of a debilitated stomach; also in typhus fever, and for cutaneous eruptions, and is used in gargles for inflammatory and putrid sore throats, and in injections for *gonorrhœa*, (which see.) The dose is from 10 to 20 drops, properly diluted; for a gargle it should be from ½ a drachm to 2 drachms in 6 fluid ounces of water; for an injection 8 drops to 4 ounces. It is sometimes given as a vermifuge (see *Worms*), and used as a refrigerent and astringent lotion. *The Diluted Hydrochloric Acid* of the Pharmacopœia is that most usually prescribed. The proportion is 4 parts of strong acid to 12 of water, that is 1 in 4. It is a pale straw-coloured liquid, much heavier than water, giving out a suffocating fume, and extremely caustic. It will speedily remove ink stains from linen, which it will destroy if not washed out almost soon after it is applied.

3. NITRIC ACID (*A Nitricum*). Prepared from nitrate of potash, or saltpetre and sulphuric acid. A heavy colourless fluid, has tonic, antiseptic, and antisyphilitic properties; it is given in chronic disease of the liver and indigestion, especially when connected with urinary deposit of uric acid, and the phosphates. On scrofulous habits, and constitutions worn out by indulgence in excesses, it sometimes has a good effect; it has also been found useful in *hooping-cough* and *asthma* (which see). It is usually prescribed in the diluted form of 1 part to 9 parts of water, the dose of which is from 10 to 20 drops. Largely diluted, it is given as a drink in fevers of the typhoid kind, in dyspepsia, and cases where there is a redundancy of bile.

4. NITRO-MURIATIC ACID (*A. Nitro-hydrochloric*) is composed of one part nitric to two parts muriatic acid. Is thought to act more decidedly upon the liver than the preceding, and especially as applied to the skin in a diluted form by footbath and spunging. This too is serviceable in syphilitic and cutaneous diseases.

5. NITROS ACID, OR AQUA-FORTIS (*A. Nitrosum*), consists of nitric acid and nitric oxide in combination—colour, deep brown; fumes suffocating, and volatile; not much used for medicinal purposes; much the same as the three last-mentioned acids in its effects, and, like them, to a certain extent, a disinfectant; preferred by some to either of them in cases of *Cholera*, which see.

6. SULPHURIC ACID, or OIL OF VITRIOL (*A. Sulphuricum*). Prepared from sulphur. This is the most ponderous of all the fluids, except quicksilver, being more than double the weight of water: when pure it is perfectly clear and white, but so great is its dissolving power, that the slightest portion of vegetable or animal matter which it may take up, speedily deepens the colour, and eventually turns it nearly black. This is the strongest and most corrosive of acids, and one of the most powerful of mineral poisons; and yet, largely diluted, it is very commonly administered as an antiseptic and refrigerent in typhoid fevers; as a tonic in general debility; and as an astringent in hæmorrhages and excessive perspiration. In chronic cutaneous affections, where there is troublesome itching, it is also given with good effect; and latterly it has been much used, and with remarkable success, in the epidemic diarrhœa often premonitory of cholera, which has, from time to time prevailed in this and other countries. *The diluted Sulphuric Acid* of the Pharmacopœia (*A. Sulphuricum Dilutum*), which is usually prescribed, contains 1½ in 20 parts, and the dose of this is from 10 to 30 minims largely diluted. For a gargle to check salivation, 1 to 3 drachms may be put into half a pint of any convenient fluid; this may be used in all cases where an astringent application is required.

7. AROMATIC SULPHURIC ACID, or ELIXIR

OF VITRIOL, is composed of spirits of wine, sulphuric acid, and spices. It is an elegant and useful preparation, which was formerly much more administered than it is at present. This is stimulant and tonic, and is good in dyspepsia, the debility following fevers, combined with bitter infusions, and also in chronic asthma. The strong sulphuric acid may be applied to the skin as a caustic, either alone or formed into a paste with saffron, in which form it is *Causticum Sulphurcum;* it may be used as a stimulating ointment mixed with lard, as in the *Unguenti Acidi Sulphurici;* or with oils, as in the *Liniment Ac. Sulph. Compositum;* largely diluted with water it is a good lotion for skin diseases and astringent injections.

ACID BATHS. See *Baths.*

ACIDIFIABLE. A term applied to substances capable of being converted into an acid by an *acidifying principle*, as that is called which possesses this power of conversion; such it was once thought was oxygen, but it is now well known that when two or more bodies combine to form an acid, they all enter into the composition thereof.

ACIDIFICATION. The conversion of a body into an acid.

ACIDITY. The peculiar quality of acids.

ACIDIMETRY. The measurement of the strength of acids are all terms springing from the same root and used in chemistry.

ACINI (plural of *Acinus*, a grape-stone). In anatomy the small granulations composing the substance of the liver and some other glands. These *acini* which are sometimes called *glandular vesicles*, appear to be the terminations of the smaller branches of the excretary ducts or passages; they are oval in shape, about 1-400th of an inch in diameter, and somewhat less than 1-2000th of an inch in breadth.

ACINIFORM (from the Latin, *acinus*, a raisin stone, and *forma*, likeness). An anatomical term, sometimes applied to certain membranes, from their supposed resemblance to raisin stones. See *Choroide.*

ACINESIA (from the Greek, *a* not, and *kineo*, to move). Deprivation of the power of motion.

ACRON (from the Greek *akron*, without colour), a colourless state of the skin, arising from a want of the usual pigmentary, or colouring matter of the membrane situated beneath the cuticle. See *Rete Muscorum, Skin.*

ACNE (from the Greek *akne* the top, hence also the word *acme* the height), a full fruition of anything, applied to a form of eruptive disease, having its origin in what are called the *sebaceous follicles*, that is, small cavities situated in the skin, which supply the cuticle with an oily matter, which is called the *sebaceous fluid.* The tumours which arise from this disease occur chiefly in the face; they contain a thick cheesy matter which it is difficult to get rid of, on account of its consistency, and the small opening afforded for its egress.

Acne has four distinct forms of developement:—1st. Simple Pimple *(A. Simplex)*, which is its mildest form, and is almost confined to persons between the ages of fifteen and thirty, at which period of life, it is, in this country, very prevalent. It may be considered as a form of inflammation set up by nature to rid the system of the superfluous matter accumulated in the follicles; first appear red spots on the skin, accompanied by itching and irritation, these gradually swell into unsightly pustules, which in a short time discharge their contents; the inflammation then subsides, and the skin resumes its usual appearance. If proper attention is not paid to these pimples, and dirt is suffered to get into them, the disease assumes its 2nd form *(A. Punctata)*. Spotted or Maggot Pimples, on account of the little black specks, like the heads of maggots, which present themselves. When several of the follicles become inflamed together, and a hardening of their bases ensues, we have, 3rdly, *(A. Indurata)*, Stone Pock, as it is commonly called; and if the pimples become very red, or coppery, then it is called, 4thly *(A. Rosacea)*, Rosy-drop, Carbuncle-face, Brandy-face, Copper-nose.

Treatment. The great object is to obtain a free discharge of the offending matter, and to remove the cause by exciting the tissues of the skin to a healthy action; hence frequent washing is desirable, and friction applied gently, so as not to break the pustules, and cause them to run one into another, producing wounds difficult to heal. A sponge and warm water, in which has been dissolved a small quantity of Bicarbonate of Soda, and afterwards a soft thick towel, are the best cleansing adjuncts; and for a lotion to cool the inflamed parts and allay irritation, take Goulard's Extract, or Liquor of Acetate of Lead, 1 drachm, added to 8 ounces of Elder-flower, or Rose-water; or else, to the same quantity of the latter, add Glycerine, ½ an ounce; Chloride of Zinc, 12 grains. Dip a piece of lint into either of these lotions, and moisten the pustules therewith frequently. When the disease is obstinate, and especially if it assumes the red appearance, it is well to apply Collodion with a camel-hair brush to the eruptions occasionally, and to use a stronger form of the last of the above lotions, with a dressing at night of stimulating ointment, composed of Ointment of Zinc, and of Nitrate of Mercury, in the proportion of 1 drachm of the former to 1 ounce of the latter, with 4 drops of Creosote added. Care should be taken to keep up a proper action of the liver and kidneys, that the skin may have only its own work to do in removing the impurities of the blood. The system should be strengthened by tonics, and a generous but not over full diet; it is best to avoid fermented liquors. The following is a good mixture:—Spirit of Nitric Ether, 2 drachms; Liquor of Potash and Ipecacuanha Wine, of each 1 drachm; Syrup of Rhubarb, ½ an ounce; Infusion of Gentian, 7 ounces: take 2 tablespoonfuls two or three times a-day, and one of the following pills every second or third night:—Compound Rhubarb Pill, 2 scruples; Mercurial or Blue Pill, 12 grains; make into 12 pills. See *Eruptions*, *Pimples*, *Skin.*

Aconite (from the Greek *akoniton*). A poisonous plant, called Wolf's-bane, or Monk's-hood, the latter term being derived from the form of the blossom, which is shaped like a hood or cowl.

There are several species of Aconites, all highly poisonous; the roots of some which grow on the lofty pastures of the Swiss mountains, were formerly powdered and mixed with food to form a bait for wolves, hence the first of the above names. That which produces the most virulent poison is the *Aconitum Ferox*, which is a native of India. Of the kinds grown in our gardens—including the Yellow Monkshood (*A. Anthora*), and the Hairy Wolf's-bane (*A. Barbatum*)—the Purple Monkshood (*A. Napellus*) called by the old English writers the Purple Helmet-flower, is the most common. Its tall spike of dingy purplish blossoms is very conspicuous during the summer months, but children and persons in delicate health should beware of approaching it too near, as even inhaling the scent has been known to produce sickness and fainting. Many lamentable accidents have occurred through mistaking the roots of the Aconite for horse-radish, and this should be a sufficient reason for excluding the former plant from the kitchen garden, at all events. (See *cut.*)

The Aconite belongs to the natural order *Ranunculaceæ;* it is therefore nearly allied to the buttercups of our fields, and the ranunculus of our gardens; the leaves and roots are the parts of the plant employed in medicine. In proper doses they are anodyne, sedative, diuretic, and diaphoretic; they are administered in dropsy, consumption, hypertrophy, or excessive growth of the heart, &c. Outwardly they are used to relieve neuralgic and rheumatic pains, the best form of application being a liniment as follows:—Extract of Aconite, 1 scruple; Soap Liniment, and Compound Camphor Liniment, of each 1 ounce; rubbed into the part affected night and morning. It is sometimes used in the form of ointment, of which there are two formulas in the Pharmacopœia, the simple and the ammoniated, the latter being the preferable. The dose of Extract of Aconite is from ¼ grain up to 2 grains; that prepared according to the Edinburgh Pharmacopœia is considered the strongest; of the Tincture of Aconite there are three strengths—London, dose 7 to 10 minims; Dublin, 5 to 8 minims; and that called Dr. Flemmings, 3 to 5 minims. In prescriptions it should be specified which of these is meant. There is also the active principle of Aconite called *Aconitine*, which is far too

powerful for internal use; it is sometimes ordered for ointment; the price of it is extremely high; 5 grains mixed with 1 ounce of lard makes a very strong ointment.

Aconite, Poisoning by.—Symptoms. A burning sensation in the throat, pain in the abdomen, vomiting, and diarrhœa, succeeded by giddiness and delirium, which end in coma and convulsions, if enough has been taken to cause death.

Treatment. Vomiting to be produced by mustard, salt, a feather down the throat, or the readiest means, and encouraged by copious draughts of thin gruel or warm water, adding a little spirit, or wine, if the depression be extreme; in which case also apply hot mustard and water to the extremities, and place large mustard plasters down the spine to rouse the nervous system. Promote the evacuation of the bowels by repeated doses of castor oil, given in hot brandy and water, should they not act very freely without, and administer 15 drops of spirits of Sal Volatile in Camphor mixture, about every hour, when the poison is ejected, and the patient appears to be recovering. See *Poisons.*

Acratia (from the Greek, *a* not, and *kratos*, strength). Weakness, intemperance.

Acromion (from the Greek *akron* extreme, and *oomos* the shoulder). The humeral, or upper extremity of the scapula, or shoulder blade; hence the term *acromial* applies to the arteries, veins, nerves, &c., of this part. See *Shoulder.*

Acros (Greek *akros*, top), from whence we have several medical terms, now or formerly used, as—1, *acro-bystia*, the extremity of the perpuce; 2, *acro-chier*, the forearm and hand; 3, *acro-chordon*, an excrescence on the skin, with a slender base; 4, *acro-pathia*, a disease at any extremity of the body; 5, *acro-posthea*, synonymous with the first; 6, *acro-thymion*, a conical, rugated bleeding wart; 7. *acr-olenion*, the upper extremity of the ulna; 8, *acr-omion*, the humeral extremity of the scapula; 9, *acr-omphalion*, the extremity of the umbilicus or navel.

Acrotismus (from the Greek *a*, not, and *krotos*, pulse). Defect of pulse. See *Asphyxia*, *Crotophus.*

Aetiology (from the Greek *aitia* a cause, and *logos* a treatise). The doctrine of the causes of disease.

Action (from the Latin *ago* to act). Means the motions and changes observable in the animal body: these may be either *voluntary*, produced by the contraction and expansion of the muscles, in accordance with the will; or *involuntary* or *excited*, as those of the larynx, pharynx, &c., which receive their impulse through the spinal marrow and nerves; and those depending upon irritability, the former being termed *mediate* and the latter *immediate* actions. Then there are the mixed or *respiratory*, as well as the *secretary*, *nutrient*, and *absorbent* actions of the body, which are all independent of the will.

Medicinal Action is that of the various remedies taken for sickness, or disease, and its nature depends, of course, upon that of the remedies prescribed, and in some degree also upon the state of the system at the time of administration. People are often surprised that a dose of medicine which will operate powerfully at one time, will at another have little or no effect; sometimes this may be the fault of the medicine itself, the drug or preparation may have become spoiled and lost its virtues; but very frequently it is owing to some change in the state and condition of the stomach or other part, on which it is intended especially to act. See *Aperients*, *Cathartics*, &c.

Actœa Racemosa. Black Snakeroot, an American plant, recommended for its expectoral, diaphoretic, and antispasmodic qualities.

Acupuncture (from the Latin *acus*, a needle, and *pungo*, to prick). This is a curative process, sometimes resorted to in cases of dropsy, neuralgia, and chronic rheumatism. The method of operation is this:—The skin is pierced with a needle about ten inches long, fitted into a handle. A quick rotatory motion is then imparted to the instrument, which is kept up for a short time, and then another insertion is made. The practice was first observed to obtain among the Chinese, and other nations of the East, who seem to have entertained the notion that several diseases, attended by severe pain, arose from air or vapour pent up in the body, which this process was intended to liberate. European travellers who witnessed beneficial results from the practice, introduced it into this and other countries, and it was, for a time, quite a fashionable remedy for painful local affections; but it did not remain so long, and is now seldom resorted to. In that species of dropsy termed *Anasarca*, in which the water is accumulated in the cellular membrane, immediately beneath the skin, it may be used with advantage, and also as a counter-irritant, in cases where it is desirable to excite inflammatory action in the outer tissues of the skin.

Acute (from the Latin *acutus*, sharp).

By this term, physicians distinguish the earlier and more rapid stages of a disease, which next advances into the *sub-acute*, and, if not arrested in its course, finally settles into the *chronic*, or more or less permanent state.

ADANSONIA (*Baobab Tree*). This is one of the most gigantic forms of tropical vegetation, the trunk sometimes measuring 80 feet in circumference. Its scientific name is *Adansonia Digitata*, and it belongs to the natural order *Bombaceæ*. In Africa, where it is chiefly found, it is called by the natives *Lulo*. It has tonic and diaphoretic properties, and has been recommended as a substitute for *Cinchona*, from which it differs in having but little taste. It is best administered in the form of decoction, prepared as under. The preparation is very mucilaginous, and soon spoils; therefore, more than sufficient for two or three days should not be made at once:—Baobab bark, bruised, 10 drachms; water, 20 ounces. Boil ten minutes in a covered vessel, and strain: dose—1 to 4 ounces three times a-day. It may also be taken in powder, but this, on account of the large quantity required, is inconvenient. The cut represents the flower and fruit of the tree.

ADDITAMENTUM (from the Latin *addo*, to add). A term applied to the sutures, which connect certain parts of the skull, called the parietal and occipital bones, with the mastoid portion of the temporal. See *Skull*.

ADEMONIA (from the Greek *ademoneo*, to be in despair). An old medical term, denoting restlessness, anxiety.

ADEN (Greek, *aden* a gland). Hence we have *Adenography*, a treatise on the glands; *Adenology*, the doctrine of the glands; and *Adenoid*, resembling a gland: all medical terms occasionally used. See *Glands*.

ADEPHAGEA (from the Greek *aden*, abundantly, and *phago*, to eat). Voracious appetite. See *Bulimia*.

ADEPS (Latin for animal oil or fat), commonly applied to hog's lard, which forms the basis of most of the ointments in the Pharmacopœia, and is an article of great utility in the arts and sciences, as well in domestic economy and for medical purposes. If good, it is perfectly white, and free from taste or smell, except that which is peculiar to the purest animal fat. The *Adeps Suillus*, or hog's lard of commerce, is often much adulterated, and, having salt in it, is scarcely fit for medical purposes; to render it so, it should be melted down with twice its weight of boiling water, stirred for a while, and then set aside to cool; the water will take up the salt and other impurities, and can be poured off when the fat has become cold. This is the prepared lard (*Adeps præparata*) of the Pharmacopœia, and is, or should be, always used for medical preparations. *Adeps Anserinus*, and *A. Ovilli*, or *Sevum* goose-grease, and mutton or deer suet—are also used medically, chiefly for chaps on the hands and other parts, roughness of the skin, and broken chilblains. They are cooling and emollient, and therefore well-calculated to allay the smarting and irritation of cracked lips, and the like; either of them melted down with about an equal quantity of rose or elder flower water, and stirred until cold, make an agreeable pomade or cream, more serviceable and pleasant to use than the fat alone. See *Chaps*, *Chilblains*, *Cold Cream*, *Pomade*.

ADHESION (from the Latin *adhæreo*, to stick to). This term in surgery signifies the growing together of parts which have been separated by natural or artificial means; it is promoted by the exudation of a lymph, or sticky fluid, for the production of which a certain amount of inflammation is necessary, hence the edges of wounds which exhibit a disposition to become hard, and remain apart, are sometimes scraped, or pared, to produce a raw surface, and inflammatory action; then, if brought closely together, they will commonly adhere, and the wound will heal; if this be the case, and there is no ulceration, nor formation of matter, to obstruct the curative process, it is called a healing, or uniting, "by the first intention." This tendency to adhesion of inflamed surfaces, sometimes gives the surgeon much trouble, as in the cases of inflammation of the chest and abdomen, and of burns and scalds on the hands and feet, where, if great care be not taken, the toes and fingers may become permanently united. See *Burns*, *Inflammation*, *Lymph*, *Scalds*, *Wounds*.

Adhesive Plaister (*Emplastrum Adhesivum*). Plaisters which are simply adhesive, such as the common Diachylon and Isinglass plaisters, are those which are most generally applied to wounds, cuts, and abraded surfaces, to protect them in the one case, and close them in the other. The former under the name of White Sticking plaster or Strapping is in constant request, and since it has been spread by machinery is a very beautiful preparation, smooth as glass, with a perfectly uniform surface, and without cracks, specks, or impurities of any kind; such it is if properly prepared; that most generally used is spread on calico, but that on linen is preferable. The Black Isinglass, or, as it is often called, Court Plaister, is a more elegant preparation, adapted for covering cuts or spots on the face, or other exposed parts; the better sort is spread on silk; the more common on black calico. All these plaisters are to a certain extent healing. See *Cuts*, *Dressing*, *Plaisters*, *Wounds*.

Adiantum (*Maiden Hair*). There is but one species of the Maiden Hair Ferns indigenous to Britain; it is called by botanists *Adiantum capillus veneris*, and is used medicinally in coughs and catarrhal disorders. It is a small evergreen species, with black stems little thicker than packthread, which have something the appearance of hair; hence the common name of the plant. The American Maiden Hair (*A. pedatum*), has the same pectoral qualities, and is much used in France for making the *Sirop de Capillaire*. Country people boil up the leaves of several of our native ferns to make demulcent drinks, and find them useful; but, with the exception of one species, to be hereafter described, they do not merit a place in our modern Pharmacopœias. See *Male Fern*.

Adiapneustia (from the Greek *a* not, *dia* through, and *pneu* to breathe). Defective or impeded perspiration, nearly synonymous with *Adiaphoresis*.

Adipocire. A substance obtained from the soapy matter into which muscular fibre is converted when buried in large masses, or exposed to the constant action of water. It is highly inflammable, dry, oily, waxy, capable of crystallization, and quite insoluble in water.

Adipose Membrane, or Tissue. This it is which encloses the *adeps* or animal fat; it is described by Wilson as composed of minute cells aggregated together in clusters of various sizes within the *areolæ*, or void spaces of common cellular tissue. The cells of adipose tissue are identical in manner of formation with other cells, being developed around nuclei, or centres, and increased in size by the formation of fluid in the interior. In adipose cells this fluid instead of being albuminous (see *albumen*) as in other cells, is oleaginous (oily); the oil at first appearing in separate globules, which subsequently coalesce into a single drop. The size of adipose cells at their full development is about 1-500th of an inch in diameter; when isolated they are globular in form, but are hexagonal or polyhedral (six sided, or many sided), when compressed. They are perfectly transparent, the cell membrane being structureless, and the nucleus disappearing as they attain their full size. Such is the cellular tissue, according to the increase or diminution of which, we are stout or slim, obese or attenuated. See *Fatness*, *Obesity*, *Tissues*.

Adipsa (from the Greek *a* not, and *dipsa* thirst). Applied to medicines which quench thirst. In old medical works we sometimes find oxymel so called.

Adjuvans (from the Latin *adjuvo*, to help), applied to that part of a medical formula which assists and promotes the operation. See *Prescription*.

Adnata Tunica (from the Latin *adnascor*, to grow to, and *tunica*, a tunic, or coat). The external coat of the eye. *See Conjunctiva*.

ADOLESCENCE (from the Latin *adolesco*, to grow). The period of life at which the body has attained its full development, commencing at puberty and terminating in the male at twenty-five and in the female at twenty-one. See *Age*.

ADULT (from the Latin *adolesco*, to grow). This term is generally applied to those grown up; past the age of infancy and weakness. See *Age*.

ADULTERATION (from the Latin *adultero*, to pollute) OF FOOD. This is a subject into which we cannot enter at great length, although it is one which is intimately connected with the physiology of health and disease. No one doubts that adulteration is largely practised, that almost every article we eat is other than it professes to be. The ablest chemists of the day have been recently directing their attention to this important subject, and have made revelations that have startled the eating and drinking public. The result of their investigations with regard to some of the commonest necessaries of life may be briefly stated.

Bread. In the composition of this great staple of existence, the flour of other cereals, such as barley, rye, maize, is frequently mixed with that of wheat; this is especially the case with brown bread; in the white, not so manageable on account of its colour, ground rice is oftener employed; and as it absorbs much water, which the heat of an ordinary oven does not evaporate, the bulk and weight of the dough is increased by this process, to the detriment of its nutritive powers. Meal of peas or beans is the common article of adulteration in the second class bread, which, it has been contended, is rendered better by such adulteration; but, no plea should suffice to give the manufacturer the power to furnish the consumer with other than that which he professes to sell. If people choose to eat bread made of pea or bean meal, let them do so; but let it be sold as such. Potatoes are undoubtedly much used by bakers, but it appears to be more as a ferment, than to cause any fictitious increase of bulk, the potatoe mash being almost invariably allowed to pass into the state of fermentation, before it is added to the flour. It has been shown that by the substitution of flour or tapioca paste for water, in the bread-making operation, the weight of dough made from a certain quantity of flour is increased greatly, but this is at the expense of nutrition. Bone earth is one of the substances used to impart whiteness and increased weight to bread; but this confers no nutritive quality; on the contrary, it is very indigestible, and, therefore, deleterious. Chalk is sometimes added to bread, and especially to biscuit, to give weight and whiteness, and this, also, is mischievous. Liebig has recommended the use of lime-water in the manufacture of bread; he considers that it not only improves the appearance, but supplies a want, that of lime, under which those who feed too exclusively upon this staff of life, frequently suffer. If the clear solution is used, it is certain that the quantity of lime is too small to be made subservient to any increase of weight, or practical alteration in the constitution of the bread, and the adulteration, if it be so considered, is a harmless one; and if the benefits attributed to it are really conferred, there is no good reason why it should not be practised; but, at present, there is nothing beyond the weight of the great chemist's authority to prove his hypothesis true. Alum undoubtedly imparts whiteness to bread, and is almost universally employed for this purpose; it gives to inferior qualities the appearance of those which are better, and, therefore, its use is liable to suspicion. It is yet an open question whether bakers should be allowed to use alum under certain restrictions; if the quantity be not large, we are inclined to think that it is by no means injurious, any more than is common salt, which is also used.

Sulphate of copper, commonly known as blue vitriol, is said to have the same effect as alum, and all the objections which can be urged against the employment of that astringent, apply with tenfold force to this; it can only be used in very minute quantities without imparting a blue tinge and a metallic taste to the bread. In Belgium, its use was once so prevalent that the Government interfered to check it.

Diseased Grain. Various diseases, such as smut, blight, mildew, &c., attack the cereal crops, and render the flour prejudicial, if not absolutely poisonous. Rye is especially liable to a certain fungoid growth, which establishes itself in the grain, and produces *Ergot of Rye*, which see; also, *Ergotism*.

The seeds of poisonous grasses, also, sometimes find their way into the hopper with the grain, and so become mixed with the flour; this should be carefully guarded against, or much mischief may result.

It has been said that the German yeast, now so largely employed by bakers, has deleterious qualities; but this charge remains to be substantiated. The subject is worthy of the fullest investigation, having so important a relation to the public health. See *Bread*.

Tea. This article of general consumption is often largely adulterated, but not, as the popular opinion goes, with sloe leaves, so much as with certain inferior kinds, and compositions, made up by the Chinese themselves, and which they have the honesty to call "lie" teas; they are prepared exclusively for the foreign markets; the celestials knowing better than to use them at home. They are an admixture of gum, brown earthy matter, and a little tea dust, just to give it a flavour. This lie tea was formerly imported by our wholesale dealers in much larger quantities than it is at present, the Excise having refused to allow it to come in under the lower scale of duty as a manufactured article, yet it is by no means extinct as a branch of commerce. Leaves of the sloe, and some other native trees, are perhaps used to some extent, and tea leaves that have once undergone the process of infusion are collected by certain active agents, dried and mixed with the fresh importations, in large quantities. But the most deleterious process which the tea undergoes is that of glazing and colouring, which is done mostly in China. Naturally the leaves of the plant, when dried, are of a dull slaty colour, or in the green sorts with just a verdant tinge: an increase of blackness is imparted by a coating of plumbago, and the green is deepened and made to sparkle by talc, turmeric and Prussian blue, which although comparatively an inert substance, is yet so much dead indigestible matter taken into the stomach, and therefore injurious. Thus much for Tea *adulterations;* we shall have to say more presently of this article under the heads of *Beverages*, *Drinks*, *Tea*.

Coffee. It is well known that the great agent of adulteration in this favourite beverage is the roasted and powdered root of the *endive*, or *chicory*, which see.

Those who prefer this admixture to the pure berry, as very many do, may continue to take it without injury to themselves; and there can be no objection to the grocers vending it, provided always they do so as a mixture, and at a proper price; it is best, however, for the customer to buy his coffee and chicory separate, and mix them as he likes; the former should be unground, or he may chance to get some of the latter with it, and so make a double adulteration, with, perhaps, ground horse-beans introduced into the compound. A while since, when coffee was much sold in canisters, they are said to have been sometimes filled according to a sliding scale—chicory, nearly pure, at the bottom; coffee, nearly pure, at the top; in the middle, about equal parts of each. There is yet a good deal of canister coffee sold, and much of it is, doubtless, adulterated; but whether this ingenious practice is adopted we cannot say. An easy method of detecting chicory in coffee is to put a little of the suspected powder in cold water; if it be pure coffee it will scarcely impart a susceptible tinge of colour; if the endive powder be present, the fluid will quickly assume a ruddy tinge; but the most unfailing testimony is the microscope, which has recently been employed with such signal results by the Lancet Sanitary Commissioners. See *Beverages*, *Drinks*, *Coffee*.

Cocoa and Chocolate. That earthy colouring matter may be found in a great proportion of the preparations sold under the above names we have the testimony of Dr. Hassall to shew. Cocoa, flaked and granulated, paste and roll, and rock, homœpathic, and soluble, chocolate and broma, and the various dietary compounds manufactured from the original cocoa-nibs, all, or nearly all, have the taint of adulteration, although in many instances it should not perhaps be so called; starch, for instance, appears to be really necessary to suspend the insoluble portions of cocoa, and render it fit for a dietary drink. Unlike tea and coffee, whose active principles are exhausted by infusion, yielding a perfectly clear solution, cocoa must itself be taken, as it were, in the body, and as it sinks to the bottom speedily, unless held in solution by some tenacious matter; and as starch, be it of potatoe, wheat, sago, or whatever else of the farina, best effects the object, we should scarcely call the addition of this an adulteration. And sugar! what about that? It is wholesome, at all events, and betrays its presence by its sweetness; and then the preparations into which it enters are sold as compounds, not as pure cocoa. On the whole the Sanatory Commission cannot make out a very strong case against the cocoa sellers; the earthy colouring matter is the worst feature of the business, but this is not often present in any considerable quantities; when it is, its effects may be mischievous to some extent, although it would not be easy for the consumer to detect its presence. The surest plan to get perfectly genuine cocoa is to buy the nibs, grind, and prepare them at home for use. See *Beverages*, *Drinks*, *Cocoa*.

Sugar, we believe, is not adulterated to any considerable extent now, although when the duty, and, consequently, the price, was higher, it used to be. Moist sugars, and especially the inferior kinds, have in them many impurities no doubt, but these can hardly be called adulterations: it may be true that sand is sometimes added to them, but this is such a clumsy, and easily-detected adulteration, that it could not be practised, to any considerable extent, without certain discovery. Much has been said about the sugar-mites, or acari; very ugly and disgusting, no doubt, and by no means pleasant to think about as articles of food; here is a picture of one magnified—

But then they are so very small, that we swallow them quite unconsciously, as we do animalculæ in almost every thing we eat and drink, and they do us no harm. Those who do not like the idea of feeding upon such invisible monsters should take lump sugar; it is cheap enough now. But then the animal matter, and lime, said to be used largely in the process of refining and crystallization! Dr. Hassall has found both in lump sugar, but then, as Scoffern observes, "their quantities are so infinitesimally small, that they can only be called impurities by comparison with a rigid chemical standard, which is altogether deceptive when used as a standard of purity for articles of food, drink, and medicine." There is, no doubt, a great admixture of different kinds of sugar made with a view to deceive the public, and this may fairly be called an adulteration; it is the moist or uncrystallized sugars only that can be tampered with in this way. See *Food*, *Sugar*.

Treacle and Molasses. These are distinct articles, although commonly confounded. The former, to quote Scoffern, is the uncrystallized refuse of refiners; the latter, the uncrystallizable refuse of the colonial sugar manufacturers; and it is hard to say which has in it the greatest impurities which necessarily enter into the composition, and are not introduced for any fraudful or deceptive end. The more clear and colourless these sweet articles can be obtained, the more pure they are likely to be; if they are very thin, we may suspect the presence of water—an innocent adulteration as far as its qualities are concerned, but sold rather too dear at 3d. or 4d. per pound. See *Sweets*, *Treacle*, *&c.*

Butter. The only adulteration which can be made in this article is the admixture of water and salt, for the sake of adding to the weight, but neither, we imagine, can be introduced to any great extent, as their presence in large quantities is easily detected. Rank or rancid butter will be taken by no one who can purchase better, and no dealer would be mad enough to adulterate the superior with the inferior kinds. On the whole, we may look upon this as almost an unadulterable article. See *Butter*, *Diet*, *Food*.

Cheese may be more open to sophistication, although this is a delicate article to tamper with. Colouring matter is constantly employed in preparing both this and butter for the market; but the arnatto commonly used is perfectly harmless; and if consumers prefer to have these condiments a rich, yellow tint, there is no reason why the fancy should not be gratified. We give a cut of the cheese mite, a beautiful object under the microscope—not so agreeable to look at here. See *Cheese*, *Diet*, *Food*.

Many other articles of general consumption, which may properly be called *ingesta*—that is, food or medicine taken into the stomach, whether liquid or solid—might be mentioned here, but it will be better to speak of the adulterations to which they are liable under their several heads.

Adulteration of Medicines. It has been proved, by recent investigations into the character of the drugs and medical compounds chiefly used in the treatment of disease, that they are often considerably adulterated, and hence they fail to produce the effects expected by the physician who prescribes them. We shall speak more fully of these adulterations when we treat of the several articles on which they are practised; and, in the mean time, may just observe, that it is scarcely possible for the public to guard against them; they are effected chiefly at the wholesale houses in London, and at the drug grinders. The country druggist, we believe, seldom tampers with them, and is only answerable for their purity in so far as his chemical knowledge goes, and this is, sometimes, not far. He should be careful to deal only with houses of established reputation, and to pay the full market price. Cheap drugs, like cheap every thing else, cannot be of the best quality; they must have become damaged, or have undergone sophistication of some kind, to reduce their cost and value. Adulteration of many of them may be detected by colour, weight, or flavour, by those experienced in pharmacy. Chemical analysis and microscopical examination will detect nearly, if not all; and every druggist ought, in reality, to be what he professes—a chemist also, so that he shall not only be able to prepare physicians' prescriptions accurately as ordered, but guarantee to his customers a supply of pure, unadulterated drugs, and compounds of the proper strength and quality. See *Drugs*, *Medicines*, *Prescriptions*.

Adustion (from the Latin *aduro* to burn). The action of heat as applied to the body. Animal heat.

Adventitious (from the Latin *advenio*, to come to.) A term applied to false membranes; or to diseases that are not hereditary.

Advice, Medical. In times of sickness it is natural and right that we should resort to a medical adviser, and ask his aid to relieve the malady which affects us. Many who are necessitated to do this have not sufficient knowledge to form a proper estimate of those whom they consult; and a vast number cannot find the means to remunerate a qualified medical practitioner; while some, who ought to be better informed, and who can afford to pay for the help required, go by choice to quacks and other ignorant persons. But whatever the causes are, certain it is, that medical advice is more frequently asked of the druggist, or some other unlicensed practitioner, than of the "regular doctor," who is often only called in when the case is desperate, and the patient begins to despair of obtaining relief. This is a state of things for which there is no remedy, save in the growing intelligence of the public at large. Ignorant pretenders to medical skill, cannot long deceive those who are sensible and well informed. It is the object of this book to *give* medical advice, but only in those cases in which it is unnecessary, or impossible, to obtain it from a professional man. It is also our object to diffuse such information on the structure of the human frame, the functions of its organs, the action of remedies, &c., as will render persons better enabled to judge of the qualifications of their medical advisers, and more inclined to seek help in their emergency from such as are guided by scientific principles in their treatment of disease. Medical advice, to be worth following, should be clear and distinct, given without hesitation or ambiguity, received with implicit confidence, and acted on promptly and vigorously. Too often, the efforts of the medical adviser are rendered nugatory, because his directions are not properly carried out; if the patient confides not in his skill and judgment, there is little hope of his effecting a cure. *Our* advice to our readers then, is, ask medical advice only of those whom you are assured are qualified to give it, and having asked it, follow it implicitly; and, if you are able, duly reward the giver; if not, let him have your respect and lasting gratitude.

Ædoia (from the Greek *aidoor*, pudor). The pubenda. Hence we have the terms *Ædo-ptosis*, a prolapse of one or more of the pubenda. *Ædo-psophia*. Noise occasioned by the expulsion of wind from the urethra, or per vaginum.

Æsculine, an alkali discovered by a French chemist, M. Carzonerè, in the Horse-Chesnut, and found to possess febrifuge properties. It may be given in port wine, or bitter infusion, in 2 grain doses three times a-day.

Ægle Marmelas (*Bael, or Bela*, sometimes called the *Bengal Quince*), belongs to the natural order *Aurantiaceæ*. A decoction of the root is used in Malabar as a remedy for hypochondriasis, melancholy, and palpitations of the heart; and of the leaves for asthma. In this country the bark of the root and the prepared fruit have been employed, although not to any great extent, in irritation of the mucous membrane, and costiveness arising from debility. The unripe fruit, being astringent, has been found serviceable in dysentery and diarrhœa: 2 ounces of it put into a pint of water, and boiled down to half the quantity; a wineglassful of the strained decoction to be taken twice or thrice a-day. For habitual costiveness, take—Extract of Bela, 2 scruples; compound Rhubarb, or Aloes pill, 1 scruple; make into 12 pills, one to be taken every day, an hour before dinner.

Ægophony (from the Greek *aix*, a goat, and *phone*, sound). A peculiar sound, which may sometimes be detected in using the stethoscope, thought to resemble the bleat of a goat. See *Stethoscopy*.

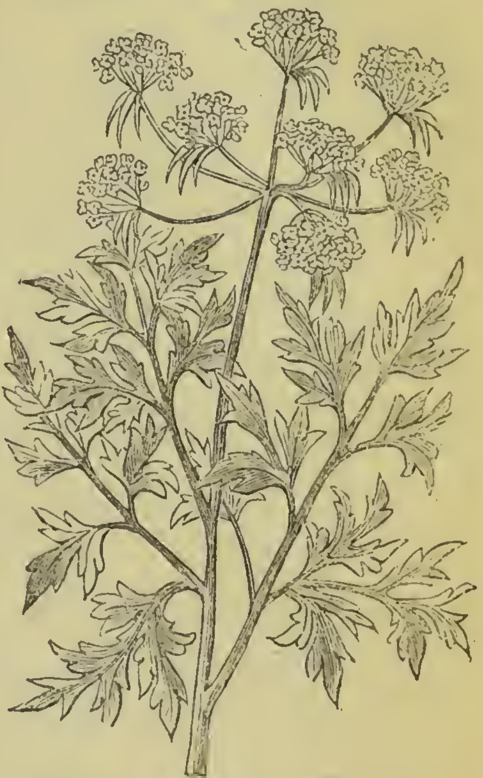
Ægopodium Podagraria. An English wild plant, variously called Gout-wort, Ash-weed, and Herb-Gerard, the root and leaves of which were formerly much used for gout, and still are to some extent by country people.

Ægylops (from the Greek *aix* a goat, and *ops* the eye). A sore just under the inner angle of the eye, so called from the supposition that goats were especially liable to it.

Ærugo is the Latin term of rust, or subacetate of copper. This is a strong metallic poison, and accidents have sometimes occurred from its employment as a pigment. See *Poisons*, *Verdigris*.

Æsculus Hippocastanum (*The Horse-Chesnut*). The bark of this tree has been used as a substitute for *Cinchona* in cases of ague, intermittent fever, &c. The dose is about 2 drachms of the powder taken twice a-day. The decoction may also be prepared and taken in the same way as that of *Cinchona*, which see.

Æthusa Sinapium (*Fool's Parsley*, or *Lesser Hemlock*). A common wayside plant, of the natural order *Umbelliferæ*, the leaves of which are poisonous, producing nausea, vomiting, spasmodic pain, numbness, &c. See *Hemlock*, *Poisons*.



Æration of the Blood is the process which takes place in the lungs, when the blood, passing in minute vessels over a large surface, only divided from the air just inhaled by a thin membrane, parts with its superfluous carbon, obtains a fresh supply of oxygen, and so becomes fitted for the support of the vital functions. This process, like the circulation, is continually going on; were it stopped for a moment, the effect would be fatal. Where there is much impurity in the air, this æration of the blood cannot properly be performed, and the whole system soon feels the deprivation of a sufficient supply of oxygen. In a pure, fresh, bracing atmosphere, what vigour is infused into the frame, how light and elastic becomes the step, unless disease has impaired the vital powers, and even then, there is an unwonted, although perhaps but a momentary energy, felt by the patient; the blood then is properly ærated, and goes coursing through the veins at an accelerated pace. See *Air*, *Blood*, *Lungs*, *Respiration*.

Ærophobia (from the Greek *aer*, air, and *phobos*, fear), a dread of fresh air. This is one of the symptoms of approaching *hydrophobia*, which see.

Æsthesia (from the Greek *aesthesis*, sensibility), perception, feeling. Hence, too, the terms *Dys-æthesia*, defective perception; *An-æsthesia*, absence of the sense of touch; and *Æstheterium*, the sensorium.

Æstrus voluticus (from the Latin *æstus* heat, and *volo* to fly). A term applied to transient heats in the face. See *Erythema*.

Æther (from the Greek *aither*). A highly volatile and inflammable fluid, produced by the action of acids on alcohol; thus we have Acetic, Hydrochloric or Muriatic, Nitric, Nitros, and Sulphuric Ethers, and of some of these more than one form of preparation. The first of these (*Ether Aceticus*) is much employed on the Continent *internally* as a mild stimulant, diaphoretic, antispasmodic, and nervine; the dose is from 5 to 30 or 40 drops; *externally*, in stimulating liniments; and, by itself, in gentle friction, for gout. The second (*E. Hydrochloricus*) is diuretic and diaphoretic, in doses of 10 to 30 minims; there is also a Spirit of Muriatic Ether not so strong, the dose being from 20 minims to 1 drachm. The third (*E. Nitricus*) and the fourth (*E. Nitrosus*), are both mildly stimulant, and more decidedly diuretic than the others, if the patient is kept warm; the dose of the latter is from 10 to 20 minims; the former, which is generally sold in a diluted form, as Sweet Spirits of Nitre, may be given in drachm doses; it is a favourite remedy in colds, especially if attended with febrile symptoms and obstructions of the urinary passages. The fifth (*E. Sulphuricus*) is, in its diluted form of Spirits of Sulphuric Ether, the kind to which the name Ether is most generally applied; it is a diffusable stimulant much employed, on account of its rapid effects, in spasmodic asthma, cramp of the stomach, colic, hiccough, palpitation, fainting, and other spasmodic and nervous affections; the dose is from 20 minims to ½ a drachm. Applied externally, it produces cold by its rapid evaporation; or if the vapour is confined, it acts as a stimulant and rubefacient. Its inhalation produces insensibility to pain, and, before the introduction of chloroform, it was much used in painful and protracted operations, although fatal results have followed its use in this way. There is a Compound Spirit of Sulphuric Ether, sold under the name of Hoffman's Anodyne Solution, which was once extensively used as a nervous stimulant, the dose ½ a drachm to 1 drachm. There is also an Aromatic Spirit of Ether, prepared with spices,—a grateful but not a very useful stimulant; it is not retained in our later editions of the Pharmacopœia. There is, too, an Etherial Oil (*Oleum Ethereum*) which is only used as an ingredient in the Compound Spirits of Ether. Chloric Ether is a solution of chloroform in alcohol. See *Anæsthetics*, *Chloroform*, *Inhalation*.

Æthiops (from the Greek *aitho*, to burn). A name given, for an obvious reason, to certain dark-coloured metallic preparations used in medicine; they have now gone nearly out of use. *Æthiop's Mineral*, which may be found in our Pharmacopœias, under the name of *Hydrargyri Sulphuretum cum Sulphure*, being a compound of Sulphur and Mercury, it is given in scrofula, and diseases of the skin.

Affinity (from the Latin *affinitas*), used in chemistry to signify the kind of attraction which different classes of bodies have for each other. It may be *single*—that is, the power by which two elementary bodies combine; or *elective*, which expresses the preference which a substance manifests in combining with one, rather than with another body. In compounding medicines, it is necessary to avoid putting together those which are *incompatible* with each other, taking care that there is a proper *affinity* between the ingredients; and here we find occasion to employ two other terms, viz., *divellent* and *quiescent* affinities. By the former, we understand those attractions which tend to destroy the original compounds, and to form new arrangements; and, by the latter, those which tend to preserve the original arrangement of the component parts.

Afflatus (from the Latin *afflo*, to blow to). A kind of *erysipelas* which attacks persons suddenly, like a blight.

Affusion (from the Latin *affundo*, to pour upon). The pouring of cold water over the head or surface of the body, sometimes, but not often, practised in fevers, especially *Scarlatina*, which see. The method of it is this:—Seat the patient in a tub, and dash a pailful of cold water over him; then wipe him thoroughly dry, and put him to bed as quickly as possible. If the operation is properly performed, it ought to be followed by a glow over the surface of the skin, and a pleasant sensation of relief to the whole system.

After-Birth. In medical language the *Placenta*, which see.

The removal of the after-birth from the womb, is often a delicate and dangerous operation, and should never be attempted by any other than the medical attendant, except when his aid really cannot be procured. It is very commonly discharged without any other assistance than the natural power of expulsion given to the womb, within an hour or so after the delivery, sometimes immediately after, and until it is, there must be considerable anxiety as to the result, the labour pains caused by the contraction of the womb, continuing at longer or shorter intervals to rack the patient, and serious flooding generally coming on, if the offending substance is not quickly removed. When the *after-pains*, as they are called, are protracted beyond the period above-named, and the placenta does not come away, the medical man, or failing him, an experienced nurse, will generally attempt to assist nature in its removal; one hand is pressed on the lower part of the abdomen, and the other, well oiled, is passed gently into the womb, so that it can grasp the after-birth, and without breaking or tearing the substance, bring it carefully away from its point of adhesion, waiting for a return of the after-pain, to remove it entirely. Force must not be used unless the case becomes desperate, and the patient appears likely to sink from a continuance of the pains and loss of blood, in which case it is better to risk tearing it away; but in all cases dexterity is better than force. By giving the after-birth a slightly twisting motion as it is withdrawn, the membranes which line the interior of the womb during pregnancy, may generally be detached, and brought away with it; but if they cannot, they may be safely left to be afterwards discharged, as they do not cause the irritation which the placenta does. It sometimes happens that the after-birth, before labour, obtains such a position near the orifice of the womb, as to prevent the delivery; it may be suspected that this is the case if a free discharge of blood takes place simultaneous with the occurrence of the labour pains, the more especially if the discharge increases with each recurrence of the pains; in this event, an examination should be instituted, and if possible, the removal of the placenta accomplished at once The best means to be adopted in this, as in all cases of hæmorrhage from the womb, are gentle but firm pressure over the bowels generally, but especially the lower portion, and the application of cloths dipped in vinegar and water, frequently renewed, to the hips and thighs; if the flooding be kept up in small quantities for a long time, a stream of cold water thrown into the womb by means of a common enema syringe may be of service. Stimulants, such as brandy or sal-volatile, must be administered in sufficient doses, if there are symptoms of fainting or exhaustion from the loss of blood. See *Flooding*, *Labour*.

AFTER-PAINS. These are the pains spoken of above as attendant on the efforts of the womb to relieve itself of the placenta. If they continue violent several hours after delivery, an anodyne draught, consisting of Tincture of Opium 25 minims, Pennyroyal, or Mint water 1 ounce, should be administered, and repeated every six hours while necessary. Surgeons very commonly order such a draught to be given soon after childbirth, even when the pains are not very severe; a hot flannel applied to the abdomen often affords some relief. An overloaded state of the bowels will frequently protract these pains, therefore it is best for the patient to take a table-spoonful of Castor Oil, with one of the above draughts. There is often a continuance of after-pains for 24 or even 36 hours; if following close upon labour, and continuing constant and unremitting, there is reason to suspect internal flooding, they are sometimes aggravated by overtight bandaging. See *Flooding*, *Labour*.

AGARIC (from the Latin *agaricum*), The general name of the mushroom family, comprehending many hundred species of *fungi*, some of which are, or were, used medicinally: thus in old Pharmacopœias will be found Surgeons' Agaric (*A. chirurgeon*), and Agaric of the Oak (*A. quercus*), a fungus formerly much given for internal hæmorrhages. See *Fungi*, *Mushrooms*.

AGARICUS MINERALES. The *Mountain Milk*, or *Mountain Meal*, of the Germans, found in clefts of rocks, &c. It is one of the purest carbonates of lime yet discovered in a natural state. It has been much used on the Continent, internally for hæmorrhages, and externally as a dressing for ulcers of long standing.

AGE (in Latin *ætas*, thought by some to be derived from the Teutonic *a a*, which signified long duration). We have here to consider it as a term including the several states or stages of human life, which the best Roman writers divided into nine periods, as follows:—1st. *Ætas firmata*, the prime or full strength of man, about the age of thirty. 2nd. *A. constans*, the steady age, about forty. 3rd. *A. matura*, about fifty. 4th. *A. provecta*, advanced age. 5th. *A. ingravescens*, the burdensome age, expressing the weight of years. 6th. *A. decrepita*, decrepit age. 7th. *A. affecta*, the state of decay. 8th. *A. exacta* or *precipitata*, the decline of life. 9th. *A. extrema*, the approaching end. Physiologists have generally agreed to divide life into six natural epochs, viz. infancy, childhood, boy or girlhood, adolescence, man or womanhood, and old age. The first period commences at birth, and extends to the end of the second year, by which time the first dentition is generally completed: the second extends to the end of the seventh or eighth year, when the second dentition is commonly over: the third period extends to the age of puberty, which is much earlier in some countries than in others; with us, in the female, it is from the twelfth to the fourteenth year, and in the male from the latter age to sixteen: the fourth period extends to the twentieth year of the female and the twenty-fourth of the male: the other periods are not determinable with any degree of exactness, especially the lapse into old age, which differs greatly in different individuals, and depends on primitive constitution, management in infancy and childhood, regimen, exercise, occupation, and other circumstances, included in what are generally called "modes of life."

In these different epochs considerable changes are observable in the physical condition of the body; they are closely connected with and dependent on the operation of a principle of consolidation, which, commencing with the first dawn of existence, continues up to its latest moment. Hence the diseases incidental to the several stages of life are of a specific character, according with the increasing, settled, or diminishing energy of the vital functions, and the peculiar states of the tissues. That which is but healthful vigour at one period may be destructive violence at another; and that which is but sufficient to produce moderate excitement in the one case, may produce fatal stimulation in the other. Many important phenomena connected with health and disease aro dependent on the difference in the distribution of blood, and other changes in the system which take place at the several epochs of life. From infancy up to maturity there is a gradually diminishing preponderance of blood in the capillary arteries; in the full pride and vigour of life the quantity of arterial and venous blood in circulation is about equal; after that, the latter increases and the former continues to diminish, the circulation becomes more slow and sluggish, and there is less of animal heat, less power to repel the attacks of disease, less activity in the brain, and all through the channels of nervous sensation. The vital powers altogether are beginning to exhibit signs of decay, which will sooner or later end in death. And this is

Old Age, on which, leaving the other periods of life, such as *Infancy*, *Childhood*, *&c.*, to be treated under their proper heads, we have now to make a few remarks. Fourscore years and ten is now the general term of human existence, whatever it might have been in the times of Biblical history; with women the fifty-third, and with men the sixtieth year, may generally be considered that in which they begin to exhibit signs of infirmity and decrepitude. Diseases incidental to this stage of life then come into play, and their effect upon the habit and constitution are soon manifest. Especially do such hereditary diseases as gout, gravel, rheumatism, apoplexy and paralysis, arise, to make a wreck of the constitution; and cancer, more particularly in women, commits its ravages, eating into the springs and sources of life, and destroying its victims with deadly certainty. Now it is that any excesses committed in the earlier periods of life, any habitual infringements of the laws of health, are found to have told upon the constitution, although this was not apparent in the full vigour of manhood. Now it is that we find impaired powers of respiration, and of secretion, and of digestion, rendering it necessary to be careful in the air we breathe, the exercise we take, and the food we eat; the latter should be light and nutritious, taken in small quantities, and at short intervals; if meat, and the teeth are defective, it should be minced before cooking, or cut up small afterwards.

It is best for aged people to take dinner early, and a light supper always, unless there is some peculiarity in the state of health to render this inadvisable. Early to bed, but *not* early to rise, is the rule at this period of life; the aged require much sleep, or, at all events, much rest, for with them deep slumber is commonly of short duration, and the recumbent position affords all the rest they need; retired as they commonly are from the busy occupations of life, they know not the weariness which results from active exertion, either of the physical or mental powers. Narcotics should never be taken to produce sleep, unless the wakefulness be occasioned by some painful disease.

Exercise should be taken by the old as long as their failing powers permit, but not carried to the extent of great fatigue.

Warmth is essential to their comfort and health; they should be wrapped in flannel, and kept in an equable temperature; it has been noticed that on the setting-in of a frost, the number of old people who have died of apoplexy and paralysis has much increased.

Cleanliness, although often neglected by the aged, or those who have the care of them, is very necessary to the preservation of life; the body should be frequently sponged with tepid water, and afterwards rubbed with a rough towel; the feet should be often washed, and the face and hands kept perfectly clean.

Amusement is as necessary to the old as to the young, but it should be of a quiet, unexciting nature. If unable to read themselves, they should be read to, and talked to, and listened to, for one of the greatest pleasures of age consists in old memories and associations. Aged persons live very much in a world of the past, and if sometimes tediously garrulous, it should be remembered, that from them this world, with its exciting hopes and depressing cares, is rapidly passing away; and that in the circle of life, with them nearly completed, the beginning and the end approach each other, until they finally join,—birth and death forming the uniting points.

Medicines for the old should be of a warm and somewhat stimulating nature; alkalines should be avoided, unless absolutely required for the counteraction of a tendency to acid in gout or gravel, and then their action should be carefully watched, as a long continuance of them may probably create a greater evil, than that which they are intended to obviate.

Aperients are often required by old people, but violent purgatives seldom; these last should be avoided as much as possible; also mercurials, except in very small doses; and neutral salts, which are of too cold and griping a nature. Compound Infusion of Senna, with a little Tincture of Ginger, Gentian, or Cardamums, added to impart warmth, and relieve the tendency to flatulency so common at this period of life, may be safely given. About an ounce of the Compound Decoction of Aloes is a good stomachic aperient; but if there is a tendency to piles half an ounce of Castor Oil in a little weak gin and water is good for those whose urinary organs require stimulating; the action of these should be carefully watched, and medical advice obtained on the slightest symptom of derangement, as the want of proper attention in time frequently entails consequences which render the after years those of misery and discomfort. Voiding the urine with old people is a work of time and difficulty; it should always be performed when the inclination arises, and never in a hurried and imperfect manner. See *Urine*.

Five grains of Compound Rhubarb pill, given at bed-time every night, or as often as required, is a good mild aperient for the aged, but it should be fresh and soft, as should all pills, or they will probably pass through the bowels unchanged. Oatmeal gruel, with figs or baked apples, will, of themselves, often prove sufficiently relaxing; if so, it is best to avoid aperient medicines altogether. For treatment of the diseases to which the aged are particularly liable, reference must be made to their several heads.

AGRIMONY (*Agrimonia eupatoria*), a plant of the natural order *rosaceæ*, common all over England in the hedgerows, pastures, and wood-sides. The leaves are astringent and aromatic, and have been found useful in the preparation of drinks for fever and slight inflammation of the

mouth and throat. Hence it has been always reckoned among our medical wild plants, and much used by herbalists.

Agennesia (from the Greek *a* not, and *gennao* to beget). Inability to beget offspring. See *Sterility.*

Ageustia (from the Greek *a* not, and *geustia* to taste). Defect or loss of *Taste*, which see.

Aglactia (from the Greek *a* not, and *gala*, milk). Defect of milk after child-birth.

Aglia (Greek *aglie*). A whitish speck in in the cornea. See *Eye.*

Agnes Castus (*The Chaste Tree*). A species of *Vitex* formerly celebrated as an antispasmodic, but not now used. Also sometimes applied by old writers to the Castor Oil Tree (*Ricinus communis*), from the cleansing effects of the purgative which it produces. See *Castor-Oil.*

Agomphasis, or Agomphosis (from the Greek *a* not, and *gomphos* a nail). Applied to looseness of the teeth.

Agrippa (from the Greek *agra* capture, and *pous* a foot). A child born with the feet foremost; hence the name of some celebrated Romans.

Agrypnia (from the Greek *agra* a capture, and *upnos* sleep). Watchfulness. Want of sleep.

Ague. An intermittent fever, characterised by cold fits succeeded by hot; very prevalent in damp, marshy districts. Between the paroxysms, or periods, there is a perfect intermission when no fever is present, and the patient feels only the lassitude resulting from debility, and can often go about his ordinary employments, if they be not too laborious. Agues have been divided in accordance with the paroxysmal periods, into—1. *Quotidian* or daily, having an interval of twenty-four hours between the attacks; 2. *Tertian*, or third-day, having an interval of 48 hours; 3. *Quartan*, or fourth-day, having an intermission of 72 hours between each attack; and 4. *Erratic*, when the return of the fever goes beyond the latter period, and is commonly irregular in its recurrence. There are several other distinctions of the fever such as *spurious* and *imperfect*, and many nice divisions of the more common forms, but they are of no practical utility. The paroxysms of ague are divided into three tolerably regular stages;— 1st., the *Cold Stage*, when the chill creeps over the system, the colour departs from the lips, the face becomes deadly pale, and the whole frame shivers and trembles as though smitten by a frosty wind, the pulse becomes slow and the veins seem filled with ice; there is generally nausea and faintness, and an utter prostration of strength; the patient has no power to stay the convulsive trembling of his every limb and joint, and which continues for a longer or shorter interval, as the case may be, and is succeeded by—2. The *Hot Stage*, when the warmth of the body gradually returns, at first irregularly, by transient flushes; then by a steady, dry, burning heat, which rises much above the natural standard; the lips resume their colour, the cheeks are flushed, the tongue is parched and white; there is a sense of fulness in the head, and flying pains in the loins, back, and other parts of the body, accompanied sometimes by a twitching of the nerves, and a difficulty of respiration; there is great thirst, and the urine is highly coloured, and burns as it is voided, the pulse is quick, strong, and hard, as in more sustained fevers. Then comes—3. The *Sweating Stage.* At first a slight moisture breaks out upon the face and neck, and this is succeeded by a profuse general perspiration; the temperature of the body falls gradually to the natural standard, the pulse softens and diminishes in frequency, the respiration becomes more full and free, the pains depart; there is a desire to evacuate the bowels, and all the animal functions are restored to their proper order. This is the common routine of an ague visitation; the length of the stages differ considerably in different cases, and so consequently does the whole duration of the attack, which may last from six to twelve hours or more, and its return may generally be calculated on with great certainty, so that the patient may prepare himself for it. Sometimes the attacks are accompanied by more severe symptoms, such as fainting fits, convulsions, cramps, spasmodic affections, and even delirium. It has been observed that the quotidian has the shortest, and the quartan the longest cold stage; of the three kinds the tertian is most common, and this occurs as much at one season of the year as another, while the quotidian makes its attacks mostly in the spring, and the quartan in the autumn. This seasonal occurrence of the disease has given occasion for the names *autumnal* and *vernal* (spring) ague, by which it is sometimes distinguished. Again, it has been noticed that the quotidian usually comes in the morning, the tertian at noon, and the quartan in the afternoon, although the exceptions to this rule, if such it may be called, are very numerous. Then, again, the different kinds of ague frequently change or lapse into each other, increasing or diminishing in the frequency of the attacks, according to local circumstances or the action of the remedies taken; very seldom does the disease leave the patient at once, but retires slowly, as though loth to be beaten; most probably the quotidian becomes a tertian, then a quartan, and then again erratic, before it finally discontinues its attacks, which also become gradually lighter and of shorter duration, until they cease altogether.

Ague attacks, almost indiscriminately, persons of all ages and conditions of life, more perhaps those of the middle age than any other, and men more than women. If poor people are generally more aguish than rich, it is simply because they are more exposed to its

Exciting Causes. The principal of which is marsh *miasma*, or *malaria;* that is, the effluvia arising from lands that have been flooded, and afterwards exposed to the heat of the sun, which draws up the moisture in the form of vapour, laden with deleterious gases, from decomposed animal and vegetable substances. Not always does the person inhaling this experience the attack of ague at once; the disease seems to be, as it were latent in the system, and to be called into activity by a particular state or condition of the body, or by some other circumstances favourable to its development, such as wet or cold weather, exposure to night air, over anxiety, want of rest or food, or aught which tends to debilitate the system. It has been contended by Dr. Snow, that merely atmospheric agents do not communicate ague, but that it enters the system by the alimentary canal, by means of the marshy and stagnant water drunk by those who live in low-lying districts. It may be so to a certain extent, but not altogether; it is by the lungs chiefly we are inclined to think that the poison enters. And what are its *effects* upon the internal economy? It causes a distension of the liver and of the spleen, the former being called *gall-cake*, and the latter *ague-cake;* the proper circulation of the blood is interfered with; it accumulates in the veins of the viscera generally; the functions of the liver and the alimentary canal are disturbed, and the consequences are such as we have endeavoured to describe.

Treatment. Ague may generally be considered as a curable disease; in dry and temperate climates especially; the more regular forms of attack are the least dangerous; when it comes at irregular periods, as it sometimes does, with great violence, and when the patient is prostrated by some other sickness, it is likely to prove fatal, especially if of long standing. Sometimes a mere change of residence to a more dry and airy locality, with proper attention to diet, will suffice to check it; and should these measures not succeed, there is little danger in allowing it to run its course, unless the patient should be weakly, in which case medicines should at once be resorted to.

It is not often that a first attack of ague can be anticipated: and during the paroxysm efforts must be directed to alleviate the severe symptoms, to shorten its progress, and avert the danger of internal congestion. In the cold stage, we should apply artificial warmth, such as hot water bottles, or a mustard bath, to the feet, mustard poultices to the pit of the stomach, friction of the back with stimulating liniment—say Soap Liniment and Spirits of Turpentine, equal parts—and the use of the hot-air bath in extreme cases. Negus, tea, gruel, barley-water, or any warm, diluent drinks, may be given: and should the fit prove long and severe, a draught, consisting of Tincture of Opium and Æther, or Compound Spirit of Ammonia, of each half a drachm, to an ounce of Camphor Mixture or Peppermint Water. When the hot stage comes on, the body should be sponged with cold water; and cool drinks, such as Lemonade—if iced, so much the better—be given. Should no Laudanum have been previously administered, a half drachm dose, without any stimulant, but with a drachm of Liquor of Acetate of Ammonia, may be given, unless there is congestion of the veins of the head, or delirium, in which case leeches, or cupping, on the temple should be resorted to, and the opiate avoided. In the sweating stage, the patient should be kept as tranquil as possible; moderate the perspiration, and, if the exhaustion is great, administer a little weak spirits and water. When the fit is over, dry the surface of the body with warm towels, put on clean, well-aired linen, and have a warm bed ready for his reception. During the intermission of the paroxysms, a mixture like the following may be taken:—Sulphate of Quinine, 12 grains; diluted Sulphuric Acid, 24 minims; Camphor Mixture, 6 ounces. Mix, and take two tablespoonfuls every four hours. Should this not prove effectual, or should it cause, as Quinine sometimes does, a throbbing in the head, it is best to try Solution of Arsenite of Potash, 5 minims, three or four times a-day, in any convenient vehicle; the dose may be gradually increased to 10 minims; but the action of this remedy must be carefully watched, as too much of it may act prejudicially on the system. Should there be tremours, griping pains in the stomach and bowels, or itching of the face and eyelids, let it be at once discontinued. Large doses of Quinine, say 10 grains, will sometimes arrest an attack of ague, if taken just as it is coming on, and so sometimes will anything making a strong impression on the mind, such as fear, hope, joy, anger, &c. Sulphate of Zinc is a good remedy for ague; 3 grains of it made into a pill with Confection of Opium, may be taken three times a-day, the dose to be increased a grain every day until it reaches 10 or 12 grains. No fluid should be swallowed for some time after the dose, or it may cause vomiting. Finely powdered Charcoal, twenty grains in brandy and water, every three or four hours, has been recommended by good authorities, and so have 10-grain doses of Cobweb, formed into pills with syrup or mucilage. Bitter infusions, such as Quassia, and Gentian, or Camomile, are no doubt serviceable in this disorder, during the progress of which purgatives should be occasionally administered: from 3 to 5 grains of Calomel, over night, and a draught of Rhubarb and Magnesia in the morning, will prove the most efficacious.

When the patient is recovering, tonics are required; any of the preparations of iron will be serviceable, and bitter infusions. A change of air is most desirable, and a good, generous diet. The above directions will apply for the most part to children, giving half-doses of the medicines and avoiding opiates; they may take the Sulphate of Zinc with a little moist sugar, or instead of Quinine, half a wineglassful of Decoction of Bark, three times a-day. See *Arsenic*, *Cinchona*, *Intermittent*, *Quinine*.

Air (Latin, *aer*). The element encompassing the terraqueous globe. See *Atmosphere*. The fluid which we breathe, considered by ancient philosophers a simple element, but found by modern chemists to consist of two simple substances, or gases, called *oxygen* and *nitrogen*, or *azote*, in the proportion of 23 parts of the former to 77 of the latter, by weight, in every hundred: these are about the proportions, under all circumstances, of pure air; but other elements enter into the composition of that which we breathe generally, and the quantity of these by which it is rendered offensive and injurious, cannot be so easily estimated; they are only known by their mischievous effects upon the delicate tissues with which they come in contact, and we speak of them, in their associated form, as *malaria* (a Latin term, signifying *bad air*), which see.

The residuum of air expelled from the lungs, after it has served the purposes of respiration, is carbonic acid gas, to breathe which in any considerable quantities is destructive of animal life; hence the danger of inhaling deteriorated air, as in ill-ventilated rooms where a number of persons are congregated, and other close places—such as the Black Hole at Calcutta, in which 140 prisoners were thrust over night, and but 20 came out alive in the morning. The air of crowded cities must always be unhealthy, partly on account of the excess of carbonic acid gas which is mixed with it, partly from other impurities—such as soot, from the chimnies (carbon), and effluvia of decayed animal matter (ammonia), &c., of which it becomes the vehicle, and the more closely the houses are packed together, the narrower the streets, the greater is the mischief resulting from these causes. Aqueous vapour, such as fog, and mist, and exhalations from pools and swamps, and marshy places, also contribute greatly to the impurity of the air; hence the necessity for a proper system of drainage, and for placing the dwellings of men as much as possible in dry and elevated situations. On broad rivers, where there is a constant flux and reflux of the tide, the air is kept well in motion; and thus many of the impurities arising from the crowding of human habitations, and the working of manufactures in the busy entrepots of commerce are carried off, otherwise they would be like so many lazar and charnel houses: as it is, the rate of mortality in them is often fearfully high, and death exacts a heavy ground-rent for the advantages of position. When, as is unfortunately too often the case, the sewerage of a great city is suffered to run into the channel of water communication, along whose banks its wharves and warehouses are built, the water becomes filled with putrid and feculent matter, which gives out noxious gases; these mingling with the atmosphere, and entering into the circulation through the lungs, poisons the very springs of life, producing fevers and other epidemics, which commit great ravages among the population, especially the ill-fed and worse clothed lower classes.

"Pure air and plenty of it," is the maxim of the true man of science; give the lungs free play, and supply them with this great pabulum of animal life, oxygen, and the chances are that the child will grow up healthy and vigorous, provided the food be nutritious and of sufficient quantity, and there be no hereditary disease, which circumstances may develope. Better is it that the winds of heaven should visit the frame a little too roughly, than that they should not visit it all; but better still is it that they should be suffered in their calmer and gentler moments to play about the persons, and pass unrestrained through the habitations of men; but checked in their wildest fury, and guarded against by warm clothing, and carefully closed doors and windows, and all the comforts of the family fire-side. We are no advocates for unnecessary exposure to air, especially cold air; the winds, those invisible messengers of health, clearing and purifying the atmosphere as they sweep along, are also sometimes messengers of sickness and death. Many of the diseases of the lungs and chest, which have borne their victims into early graves, have owed their rapid development, and often their origin, to the keen northerly blasts, and cutting easterly gales of our island home, noted for the large proportion of deaths from consumption which occur in its rolls of mortality. Let us, then, while impressing upon our readers the necessity for a good supply of pure fresh air, also warn them against the mistake of supposing that they cannot have too much of it; in our northern clime it is very possible to do so.

Air in Nurseries should be admitted very freely, during fine weather and in temperate seasons. There should be an open fire-place, with a tolerably wide chimney, and a window on the opposite side of the room, which being opened in hot weather, a current of air could pass right through the room; if the stove be a close one, and there is no chimney, there should be one or more openings in the wall of the room near the top, or the ceiling, with perforated zinc let in. It has been calculated that, even under favourable circumstances as to ventilation, about 1,000 cubic feet of space is required for the due supply of one set of human lungs with air, and, when the necessary collection of a large family in one room renders this space unattainable, the air should be changed as often as possible, by the throwing open of doors and windows, the inmates of the room retiring to another.

Air in Bed-rooms. This generally, by the morning, becomes vitiated by the quantity of carbonic acid gas exhaled by the sleepers, and requires a thorough change, which can only be effected by the opening of the windows, if there be one on either side of the room, or if they be opposite an open fire-place, or a door which can be set wide back; if this latter can be moved gently backwards and forwards, so as to put the air well in motion, it will facilitate the purifying process. The bed-room should be vacated as soon after dressing as possible, and nothing but urgent necessity should keep the sleeper therein during the day. The bed-room for children should always be distinct from the nursery, and all windows left open through the day; unless in damp foggy weather. Care should be taken to close it, and all bed-rooms before the night comes on, as in this climate, even in summer, there is generally a degree of moisture in the air at night, which is prejudicial to the health of those breathing it, especially in sleep. We are no advocate for leaving bed-room windows open through the night, however warm the weather may be; the door left ajar, with the chimney-board down, will afford quite sufficient ventilation, and obviate the risk of a chill to the person, exposed as it often is, in the restless tossing so usual in extreme heat.

Air in Dwellings. What we have said on the preceding heads will, to a certain extent, obviate the necessity for enlarging much on this; it must be obvious that if certain rooms require good and sufficient ventilation, the whole house assuredly does. Fire places in all the rooms of a house should be sufficiently capacious to admit of a thorough draught, and on no account should any of them be stopped up with fire-boards, except in the bed rooms, and then only in very severe weather and during the night. In building a house, care should be taken to have as few windows opening towards the east as possible; better a blank wall in that direction if it can be managed; but very frequently it cannot, and catarrhs and other bronchial affections will be pretty sure to prevail in a house with an eastern aspect, unless it should be sheltered by a rising ground in that direction, or a belt of evergreen shrubs and trees; these, however, should not too closely surround the building, as they interfere with the free circulation of air, and so do mischief in another way.

Houses are often rendered unhealthy by a bad arrangement of the drains, and the necessary accommodations of the family; cesspools, into which the sullage from the sinks runs, should not be under any part of the building, or the noxious gases from it will be sure to escape, and mix with the air which is breathed. Many a child has fallen suddenly sick, many a father or mother been struck down by fever, for which no cause could be assigned, and could such mysterious visitations be traced to their true source, it would be found that the badly covered cesspool, the too-near-at-hand receptacle for refuse vegetable matter, or the ill-constructed water-closet, originated the mischief.

Let the air about, and through, a dwelling-house be kept as much as possible in motion, set tho doors and windows open in warm weather, when strong winds are blowing, and in cold weather, too, when the inmates are out for a time, or sufficiently protected from chills by warm clothing, or sheltered in some other part of the building. Let the source of all unpleasant smells be at once sought out; the nose is quick to detect any foreign and unhealthy intruders into the pure atmosphere, and its warnings should ever be attended to. If bad smells cannot be got rid of by other means, disinfectants should be used; Chloride of Lime is perhaps the best, and most easily procured; buy a pound of any chemist, mix it with two gallons of water in a stone bottle, shake up, cork tight, and when wanted for use, pour off the clear liquor, and sprinkle it about the rooms and passages. See *Disinfectants.*

Air in Chapels, &c. The principles of ventilation are now getting to be so well understood, that few modern buildings intended for public assemblies, are without the necessary means and appliances for a constant and rapid change of the air within them; some, however, are still so constructed that the vitiated atmosphere can find no outlet, nor the fresh air an inlet, and into such no persons at all weak or delicate should venture; children especially should be kept out of them; and here let us enter our protest against the crowding a number of these into small school rooms, often the ordinary living rooms of common houses. It is scarcely to be expected that the young submitted to such evil influences, can grow up robust and hearty. A school room should have plenty of space above, and apertures for the foul air to escape; and even where there is the best of ventilation, the children should not be kept in it longer than two or three hours at a stretch. See *Ventilation.*

Change of Air. Upon this important branch of our present subject much might be said, and under the head of *Climate* (which see) more will be said. At present we may just remark, that change of air is at all times one of the most important auxiliaries of the medical adviser. To persons confined in close towns, accustomed to sedentary employments, and suffering from the ailments incidental to such situations, and modes of life, a change to some open hilly district, or the breezy sea-side, often produces marvellous results; so with the poor invalid, attacked, perchance by consumption, who finds the fresh breezes of the hills, or the sea-shore, too keen for the diseased lungs to breathe, for such, in some sheltered vale of Devonshire, or other southern parts of our island, relief and enjoyment may be often found. In the low-lying, thickly wooded rural districts, the air is generally relaxing, and frequently laden with miasma; persons who are obliged to dwell there, should get out upon the open hills as often as possible, and let the lungs play freely in the bracing air; those engaged in rural occupations, are usually enabled to resist the enervating efforts of the bad air which they inhale, although not always, as we see by the prevalence of ague, and other fevers, among them. After all, however, for purity of air, the country is far to be preferred to the town, and in most situations, the rural population are more healthful than the urban.

As a general rule it may be noted that dry air is good, if not too dry; in which case it is likely to cause cracks and chaps in the skin, and to be loaded with minute particles of dust which are injurious to the lungs. Moist air is not healthy to breathe, especially if accompanied by cold, as it often is in this climate, hence the prevalence of pulmonary diseases. The air of the coast if not too keen, is undoubtedly stimulating and strengthening, in a great measure owing, probably, to its containing a portion of the marine constituents; there is a healthful freshness in the very play and dash of the waves, and the lungs seem to inhale larger quantities of the atmosphere, and to expand more freely, by the margin of the wide ocean; here that indispensable condition of atmospheric purity, constant motion, ever prevails, as it does usually upon great elevations, hill tops and lofty table-lands, around and over which the gales sweep, whistling, and swaying the boughs of the pines and other mountain trees, while, in the vale below, the heat is sultry, and not a leaf is stirred. Great contrasts are exhibited in the characters of the dwellers in these two different regions, and this is owing in a considerable degree to the influence of the air they breathe. See *Respiration.*

ALA (plural *Alæ*, Latin a wing); hence the anatomical terms—*Ala*, the upper part of the auricle (see *Auris*, *Ear*, *Pavilion*); *Alæ minores*, the *Nymphæ* (which see); *Alæ nasi*, the lateral or moveable parts of the nose (see *Nasi*); *Alæ vespertilionum* (bat's-wings), the broad ligaments situated between the *Uterus* and *Fallopian* tubes, which see.

ALBICANTIA CORPORA (from the Latin *albico* to become white). Two small white substances in the *Cerebellum*, which see.

ALBINISM (from the Latin *albus* white). *Albinoes* are those in whom the skins are of an uniform, dull, milky colour, the hair pale and silky, like bleached flax; the parts of the eye called the iris, retina, and choroid, pink; the two latter, seen through the pupil, are of a lighter colour than the former. The sight of albinoes is weak in the daylight, but stronger in the dark; they are found among negroes as well as the light-skinned races of mankind. The absence of colour is owing to a want of the pigmentary deposit under the cuticle. See *Leucopathia*.

ALBUMEN (from the Latin *albus*, white), One of the most familiar examples we have of this substance is the white of an egg, which is almost pure albumen. It enters largely into the constitution of all animal bodies, and also exists to a considerable extent in the vegetable kingdom. It coagulates by heat, so that its presence in the blood, urine, &c., may be easily detected. One reason why over-boiled eggs and over-cooked meat, &c., is unwholesome, is that the albumen, of which they are largely composed, becomes hard and indigestible. Chemical analysis shows that this substance contains a quantity of pure soda, and in some cases, as in the egg, this is mixed with sulphur, hence the discoloration of the silver spoon with which the egg is eaten. When coagulated by means of galvanism, the soda appears at the negative end of the battery. The Bichloride of Mercury, or Corrosive Sublimate, is a very delicate test of the presence of albumen; water which contains only a two-thousandth part becoming milky by this addition. In a fluid state it soon becomes putrid; but, in a solid state, will keep for a long time. Albumen has been distinguished, as, first, ANIMAL, which is *Incipient*, *Liquid* and *Solid*, the first being obtained from the serum of chyle, &c.; the second, being the thick glairy fluid which constitutes the white of an egg; and, the third, a substance contained in several of the tissues of the body. Second, VEGETABLE, as obtained from the gluten of wheat, &c. See *Gliadine*, *Glue*.

ALBUGINEA, meaning whitish, is a medical term coming from the same root as the above. *Albuginea oculi*, is the fibrous membrane immediately under the conjunctiva (See *Eye*); and *A. testis*, the fibrous tunic which envelopes the *Testis*, (which see;) and *Albugo* is a white opacity of the cornea. See *Eye*.

ALCOATES. Compounds of salts with alcohol. See *Hydrates*.

ALCOHOL is an Arabic term used by chemists to signify highly rectified or pure spirit, such as Spirits of Wine; the term has also another meaning, viz., anything reduced into an impalpable powder; but it is now rarely used in this sense. Alcohol is generally prepared by fermenting saccharine substances, such as malt, and the process of converting the sugar into alcohol is called vinous fermentation. This process of conversion may be thus briefly described. The liquor containing the dissolved sugar is subjected to a heat of 150° and allowed to cool to 70°, yeast is then added; very shortly, an internal movement in the fluid takes place, a thick scum forms on the surface, and a gaseous matter escapes, which is carbonic acid gas; the hydrogen in the fluid then unites with a portion of the carbon, and forms olefiant gas, which uniting with the water (oxygen and hydrogen) composes alcohol, and this, from its superior lightness passes over and is condensed, in combination with watery vapour, in a cooled receiver. To deprive alcohol of its water, it is passed through dried Carbonate of Potash, Chloride of Calcium, Lime, Barytes, or Alumina; or it may be done by putting it in an open vessel under the exhausted receiver of an air pump, previously placed in a vessel containing Lime.

Pure alcohol is a transparent, colourless fluid, of a pungent taste and fragrant odour; it is lighter and more volatile than water, burns with a blue flame which becomes yellowish when the spirit is diluted with water, when mixed with an equal bulk of which, it is termed Proof Spirit, it then has a specific gravity of 0·917, and this is not quite so strong as that used for many tinctures and other pharmaceutical purposes, the strength of which is represented by 0·930, the gravity of pure alcohol being, according to Lowitz, 0·796, although the Leyden college make it 0 815. The pure spirit of commerce is seldom less than from 0·830 to 0·835.

Alcohol is the active principle of all intoxicating drinks, the habitual use of which, according to Dr. Paris, induces "more than half of all our chronic diseases." Brandy, Rum, Gin, Whisky, &c., are but variously flavoured forms of diluted alcohol; medicinally they are sometimes prescribed, and employed with good effect; brandy has been found especially useful to rouse the system in some cases of extreme debility, and in the sinking stages of typhus fever, &c. They are sometimes recommended as nervous stimulants in cases of great depression, but there is always danger that the taking of them may become a confirmed habit, which will grow upon the patient, and eventually make a wreck of mind and body. See *Drunkenness*.

That alcohol is a poison there can be no doubt, we see too much of its baleful effects in our everyday life and experience, to question this; yet like most other poisons it may be turned to good account in the treatment of disease, as we have already shown, and in a greatly diluted form, may be beneficially employed as an article of diet. See *Ale*, *Beer*, *Beverages*.

With every desire to avoid taking sides in the great temperance dispute which has so long agitated the public mind, we may observe that the *abuse* of a thing furnishes no argument against its *use*, and that we have no right to deny to some the pleasure and benefit which they derive from the *moderate* employment of alcoholic drinks, because very many involve themselves in disastrous consequences from taking them *immoderately*.

Besides the internal administration of alcohol, it is much used in evaporating and other *Lotions*, in *Gargles*, and *Collyria*, (which see). It forms the basis of all the *Tinctures* and medicated *Spirits* (which see) and in its several pharmaceutical forms of Rectified, Proof Spirit, and Spirit of French Wine, is in constant request both commercially and medicinally.

As a poison; when taken in large doses either as Spirits of Wine, or any of the ardent spirits, such as Brandy, Gin, &c., exhibiting all the effects which we see in the various stages of inebriety; these are followed by total insensibility, coma, and death; if the system can be relieved in time of the poison, by means of the stomach pump or an emetic, the life of the patient may be saved. The best restoratives are ammonia given in the form of the Aromatic Spirit, and strong Coffee, as in case of poisoning by Opium which see, also *Fermentation*, *Poisons*, *Spirits*.

Ale and Beer. These are fermented liquors, which are, or ought to be, made wholly of malt and hops; obtaining from the former their saccharine and alcohol (sweetness and strength), and from the latter their bitter or tonic principles. The above terms are both of Saxon origin, and it was to the Saxons, probably, that we owe the introduction of these drinks into this country. Pliny says, "All the nations of Western Europe have a liquor with which they intoxicate themselves, made of corn and water." Unfortunately, to the present day this practice of intoxication, by means of malt liquor, very much prevails, among the poorer classes especially, to whom, instead of a gentle stimulant and strengthening diet-drink, ale, beer, or porter, as the case may be, is, by excessive indulgence in it, made a moral and physical poison.

According to law, "Malt Liquors," as these beverages are called, may be brewed only from malt and hops, with sugar and water; isinglass to refine them is allowed, but no other addition, although others are often made, not so much, it is said, by the large brewers, as by the licensed retailers. The fact elicited by a recent parliamentary commission, that the publican sells his beer at the same price as he pays for it, if not lower, is sufficient to prove that considerable adulteration takes place. The following appears to be about the process:—First water is added, and this makes the beer taste poor; it is deficient in body, and also in strength, and no regular beer drinkers would take it; to remedy this the brewer's druggist is called in, and he prescribes treacle and liquorice, to give body and sweetness, and *Cocculus indicus*, a stupefying narcotic seed, to make up for the deficiency of alcohol. A little Sulphate of Iron, or Green Vitriol, commonly called Copperas, is then added to make it froth up well; and to impart bitterness, quassia is used: the beverage is now completed. Much has been said lately about the employment of Strichnine, the active principle of *Nux Vomica*, and a virulent poison, to give a bitter flavour to ale and beer; but the expense of this preparation would seem to put it altogether out of the question. Ales, it is obvious, on account of the lightness of their tints, must be less liable to be tampered with than the darker coloured fluids. The *brewing* of malt liquors is conducted upon certain fixed principles, which are modified according to the kind of beverage to be produced. See *Brewing*.

The colour of ale and beer depends very much upon that of the malt employed in its preparation, and this is in accordance with the heat to which the grain is subjected. In the paler malt the saccharine matter is in the greatest perfection; hence the pale ales are the best. *Strong Ale* is made of from eight to ten bushels of malt, and from eight to ten pounds of hops to the hogshead. For *Bitter Ale* very pale malt is used, and not above half the above quantity; and for *Table Ale*, or beer, about the same proportion of malt, with from four to nine pounds of hops, unless it is prepared from the second mash of stronger ales. Very *Small*, or *Harvest Beer*, may be brewed of from two to three bushels of malt and four pounds of hops to the hogshead; but this is for immediate use, as it will not keep. *Stout* has about one quarter of pale malt, two bushels of brown, and three-quarters of a bushel of black, or patent malt, with eight pounds of hops to the hogshead; and *Porter* is often much the same, with treacle or liquorice.

ALEXIPHARMICS (from the Greek *alexo*, to repel, and *pharmakon*, poison). An old name for antidotes for poison: from the same root we have also *Alexiterics*, preservatives against infections or poison.

ALGÆ, the sea-weed tribe of Acotyledonous plants, belonging to the order *Aphyllæ*, from some of which medicines are prepared. See *Iodine*, *Iodide of Potassium*, *&c.*

ALGEDO (from the Greek *algos*, pain), inflammation of the neck of the bladder, occurring in *Gonorrhœa* (which see). This is a term now seldom used.

ALGOR (from the Latin *algo*, to be cold). A sudden chilliness, or rigor, which seizes on the patient in some stages of *Fever*, *Cramp*, *Cholera*, which see.

ALGORATH, POWDER OF. A Protoxide of Antimony, so called after a physician of Verona, with whom it was a favourite nostrum. See *Antimony.*

ALIENATION (from the Latin *alieno*, to estrange). Mental derangement. See *Madness.*

ALIMENT (Latin *Alimentum*), nourishment, nutrition. Anything necessary for the support of life. See *Diet*, *Food.*

ALIMENTARY CANAL. This is what anatomists would call a musculo-membraneous tube, extending from the mouth to the anus, and including many of the most important organs and viscera of our internal economy. It has been divided for convenience of description and reference into the following distinct parts—the *Mouth; Pharynx; Æsophagus*, and Stomach; the small Intestines called *Duodenum*, *Jegunum*, and *Ilium;* and the large Intestines, termed *Cæcum*, *Colon*, and *Rectum*, all of which see.

Into this canal the food passes after it has reached the back of the throat, and is conveyed by a regular undulatory motion, given by the action of the æsophagus, or muscular gullet. When this motion is interrupted by an attempt to swallow too fast, the action becomes spasmodic, and a sensation of choking is produced: at the upper and larger end of the stomach, the food taken at one time is collected, and mixed with gastric juice, becoming converted into a greyish-looking pulp, called *chyme*, which, as it is formed, is passed by another wave-like motion towards the pylorus, or smaller end of the stomach. Here there is a valve which allows all well-digested food to pass, but rejects or turns back that which is not sufficiently softened. When the food has passed through the *pylorus* into the small intestines, the bile, flowing into the duodenum from the liver, mixes with it, as does also the pancreatic juice. The chyme, thus rendered more fit for the purposes of nutriment, passes onward through the small intestines, giving its *chyle*, or nutrient quality, to the lacteals. The folds and convolutions into which the intestines are thrown, are clearly for the purpose of exposing a large surface to the action of the chyme, which having traversed the small, is discharged into the large intestine, or colon, through a slit-like valve, assuming there the feculent character. In the colon the food yields up the remains of its nutrition, and is discharged through the rectum and anus. It should be borne in mind that this alimentary canal, is not only the main passage through which the food passes, but it is also the principal drain or sewer of the body; into this is cast a large proportion of the waste material which it would be injurious to retain, especially in illness; hence the necessity for keeping the passage clear by means of aperient medicines, when the bowels do not act without, even when little or no food is taken. See *Abdomen*, *Absorption*, *Digestion.*

ALKALI (from the Arabic *al*, from, *kali*, the name of a plant). The plants so called are chiefly those of marine origin, from the ashes of which, when burnt, Potash or Soda, termed fixed alkalies, can be extracted; to these two, and the volatile alkali, Ammonia, the name was formerly restricted; now, however, all caustic substances which can be volatilized by heat, and have the power of neutralizing acids, are termed alkalies; they have the property of changing vegetable blue to green, red to purple, and give to yellow a reddish brown tinge. They are largely employed in medical practice, and form a class of themselves, having very distinct peculiarities. Alkalies are of three kinds, viz.:—1. The vegetable, as *Potash;* 2. The mineral, as *Soda;* 3. The animal, as *Ammonia*, which is also distinguished as volatile alkali, being made by distillation from the horns of deer, and other animal matter. See *Ammonia*, *Potash*, *Soda*

From the same root come also the words *Alkalinity*, the property of turning vegetable blues and other colours as indicated above; *Alkalimeter*, an instrument for ascertaining the quantity of alkali in any substance; and *Alkalescent*, growing alkalin or ammoniacal, commonly applied to urine.

ALKALINE EARTHS are those which possess alkaline properties, as *Magnesia*, *Lime*, *Baryta*, and *Trontia*, which see.

Alkalization, the impregnation of any substance with an alkali.

Alkaloids (from *alkali*, and Greek *eidos*, species), are the active principles of various vegetables which have alkaline properties; their discovery may be dated from 1816, and their introduction into medical practice has proved of immense service to the physician, as their great activity admits of their administration, with absolute certainty of effect, in very minute doses. *Quinine*, the active principle of bark, and *Morphine*, that of opium, are the commonest examples of alkaloids which can be cited at present. We shall have occasion to refer to all these preparations as we proceed.

Alke-kenge, Winter Cherry, the fruit of the (*Physalis Alke-kenge*), sometimes but not often, used in *Nephritis*, *Dysuria*, *Ascitus*, *&c.*, which see.

Allantois (from the Greek *allas*, a sausage, and *eidos*, likeness). A thin transparent membrane, situate between the *Amnion* and *Chorion*, which see. Also a vesicle, or sac, projecting at the lower end of the alimentary canal, in the embryo.

Allium (from the Latin *aleo*, to stink). A genius of plants belonging to the natural order *Asphodelleæ*, of which we have familiar examples in the common Garlic *(A. Sativum)*, the Onion *(A. Cepa)*, the leek *(A. Porrum)*, and the Shallot, *(A. Ascalonicum)*. The properties of all these are stimulant, diuretic, expectorant, and deobstruent, but they are not suitable for hot and bilious temperaments, and are not often prescribed. They have been found useful in chronic catarrhs, humural asthma, and worms; epilepsy and dropsy are said to have been cured by a strong infusion of garlic, which, as well as onions, is sometimes used as a revulsive; the latter, roasted and split, are frequently applied as cataplasms to bring abscesses to maturity. Of garlic, a dose or two may be taken in the morning for worms: of the infusion of garlic, made of half a pound of the bruised roots to a pint of boiling water, two teaspoonfuls before and after every meal, for *epilepsy*: of the syrup of garlic, made of 1 ounce of the expressed juice, to 1½ ounce of lump sugar; a teaspoonful occasionally to children, for *coughs* without inflammation; of the milk of garlic, 2 drachms of the bruised bulbs boiled in 6 or 8 ounces of milk, useful as an enema for children in *thread worms*. Wine of garlic, three or four bulbs bruised and macerated in a quart of proof spirits, is a good stimulant lotion, recommended for *baldness of the head*, all of which see.

Besides the species above named the Chive and the Rocambole are used for flavoring soups, and other culinary purposes.

None of the Allium family are thought to possess deleterious qualities; they are too heating for some constitutions. The generic term *allium* is said by some to be derived from the Celtic *all*, hot or burning. We give a cut of the *onion* and *leek*.

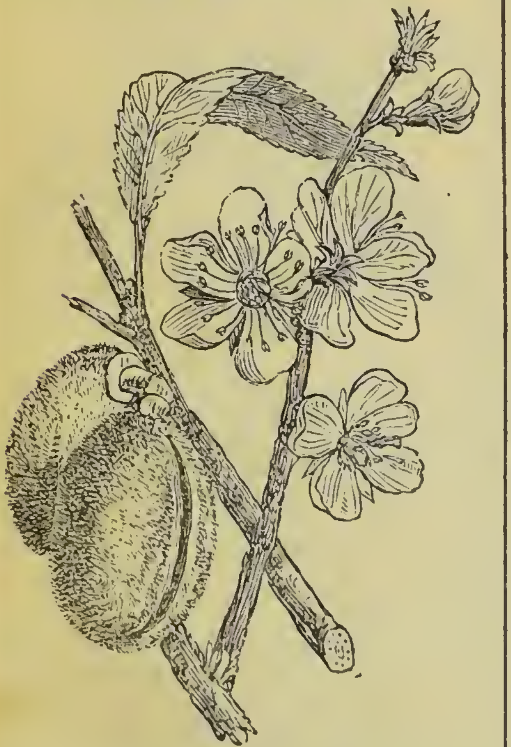
ALLOPATHY. A term used in contradistinction to Homœopathy, and generally applied to the practice of all medical practitioners who do not belong to the latter school. As a general principle, it may be stated that the allopathists contend that all diseases are to be cured or alleviated by medicines which produce their opposite condition, this being the recognised principle of action from the first foundation of medical science; while the disciples of Hahnemann contend for minute doses of the medicines which are capable of exciting in healthy persons symptoms similar to those of the diseases to be cured. See *Homœopathy*. Perhaps, in common fairness, the above term ought to be construed as meaning, the treatment of diseases with a view to effect a cure by some means *different* from the causes which produced them; for the true skilful practitioner, in his combats with disease, will avail himself of all the weapons which the armoury of science furnishes, and not be restricted in his operations by the narrow rules of this or that party. See *Medical Practice*, *Pharmacy*, *Physician*.

ALLSPICE (*Pimento*). The unripe berries of the *Eugenia Pimenta*, an evergreen West Indian tree; they have a strong spicy taste, an aromatic odour, and contain a volatile oil, which is useful as a diffusable stimulent and stomachic, the dose being from 1 to 3 minims; this is the *Oleum Pimentæ* of the Pharmacopœias: there is also Allspice Water (*Aqua Pimentæ*), used chiefly as a vehicle for other remedies: Spirits of Allspice (*Spiritus Pimentæ*), dose 1 to 2 drachms, and *Tinctura Pimentæ*, dose 10 to 12 drops. Of the Powder (*Pulvis Pimentæ*), from 10 to 40 grains may be taken; it is useful in chronic diarrhœa, combined with opium, chalk, and cinnamon. We give above a cut of the Allspice Tree.

ALMOND (Latin *Amygdala*). The almonds are a tribe of dicotyledonous plants, with the sweet and bitter kernels of whose fruit we are all sufficiently familiar; the *Amygdalis Amara* and the *A. Dulcis* appear to be but varieties of the *A. Communis*, (see cut on next page); the *A. Persica*, or Peach, formerly called the Persian Apple, is another member of the family, whose kernels, like the above-named bitter variety, contain a peculiar principle called *Amygdaline*, from which Hydrocyanic Acid, and a volatile oil are produced, both very poisonous.

The Essential Oil of Bitter Almonds (*Oleum Amygdalæ amaræ*), is much used for flavouring custards, &c.; but great cauion is necessary in its employment, on account of its poisonous nature. The same may be said of the *Aquæ* (Water) *Amygdala amaræ*, and of a weaker kind, sold under the name of Black Cherry Water, and also Peach, or Laurel Water. The leaves, as well as the kernels of the Peach, and most other trees of the tribe, have this poisonous property. See *Prussic Acid*, and *Acids.*

Sweet Almonds are emollient and demulcent, and an emulsion prepared from them is useful in bronchial diseases, in dysentery, and several affections of the urinary organs, frequently lessening the acrimony of the secretions in quite a remarkable manner. The pharmaceutical preparations are—Confection, Emulsion, Milk, Mixture, and Oil of Almonds. The first of these, is used chiefly to prepare the second, which is a very agreeable and elegant preparation; the third is seldom taken alone, but is a good vehicle for Nitrate of Potash, Opium, Squills, &c.; the fourth is but another name for the third; and the fifth is used for a variety of commercial as well as medical purposes; it is a very pure and pleasant oil to take, and recommended as a substitute for Cod-liver Oil. See *Oils.*



ALOE (Greek *aloe*). The aloes are a genus of succulent plants belonging to the natural order *Liliaceæ*, the juice flowing from which is a resinous substance of an extremely bitter and aromatic taste; a full dose operating slowly, though certainly, as a stimulant cathartic, acting chiefly on the lower bowels: in small doses it is stomachic and tonic. Aloes are ranked among the *Emmenagogues* (which see), and are useful as a remedy for the sluggish bowels to which persons of sedentary habits are particularly liable, a 5 grain pill every other night at bed time, will generally be found sufficient. In *dyspepsia*, *hypochrondriasis*, and *jaundice* aloes may be given with advantage, they have a stimulating action on the rectum, and also on the uterus, therefore must not be prescribed when there is a tendency to piles, nor during pregnancy; on account of their extreme bitterness, pills are the best form of administration; if a liquid form is adopted, they should be combined with liquorice and bitter tonics, which increase their purgative powers. There are three kinds of Aloes commonly kept by Druggists, viz., Socotrine or Cape, Barbadoes, and Hepatic; the former is the best for medicinal purposes, the two latter being too drastic in their operations; they are more generally used by the veterinary surgeon. The following are the chief pharmaceutical formulas into the composition which aloes enter:—*Extract of Aloes*, dose 1 to 5 grains; *Compound Decoction of Aloes*, ½ an ounce to 2 ounces, a mild cathartic, and anti-acid; *Enema of Aloes*, employed in dislodging

worms from the rectum; *Compound Powder of Aloes*, dose 10 to 20 grains, as a cathartic and sudorific, having in it a proportion of Gum Guiacum and Cinnamon Powder; there is also a *Powder of Aloes with Canella*, formerly much used as an aperient, under the name of *Hiera Picra*, it is not found in the late Pharmacopœias. There is, also, a *Tincture of Aloes*, simple and compound, the dose of the former being from ¼ a dram to ½ an ounce, and of the latter, from 1 to 2 drachms; and *Wine of Aloes*, given as a stomachic and purgative; in the former case from 1 to 2 drachms, and in the latter from 1 to 2 ounces. Besides these there are several aloetic preparations, not commonly used or recognized by the London or other colleges, and *Aloin*, which is the active principle of Aloes. See *Aperients*, *Cathartics*, *&c.*

ALOPINA (from the Greek *alopex*, a fox). A falling off of the hair. See *Baldness*.

ALPHITRI (plural of the Greek *Alphitris*, farina), a scientific name for *barley-meal*, which see.

ALPHONSIA. An instrument for extracting balls, invented by Alphonso Ferrier, of Naples; now nearly superseded by later inventions.

ALPHOS (Greek for white). A synonym for the *Lepra Alphoides*, or White Lepra. See *Leprosy*.

ALTHÆA (Marsh Mallow). This is the *Althæa Officinalis* of botanists, a plant of the natural order *Malvaceæ*, common enough in English marshes.

It has emollient and demulcent properties, which render it useful in inflammations and irritations of the alimentary canal, as well as of the urinary and respiratory organs: about 4 ounces of the dried root, with 2 ounces of raisins, freed from their seeds, put into 5 pints of water, and boiled down to 3 pints, is a good form of administration; half a wineglassful of the clear liquor may be taken frequently to allay cough and irritation; this is the *Mistura Althææ* of the Edinburgh Pharmacopœia; the *Syrupus Althææ* is prepared by boiling 8 ounces of the fresh root, sliced, in 4 pints of water, to which is afterwards added 2½ lbs. of lump sugar; this is a good demulcent; dose, half an ounce to 1 ounce. The Ointment of Marsh-Mallows (*Unguentum Althææ*) was a favourite healing application formerly, and is still often used. There is also a *Pasta* (paste) *Althææ*, and several other preparations of Mallows, enemas, lotions, &c The leaves and flowers of both the Marsh and Common Mallow (*Malva Sylvestris*—see cut) as well as the root, have demulcent properties, but they are chiefly used externally for soothing *fomentations*, which see; also *demulcents*.

ALTERATIVES (from the Latin *altero*, to change). A class of medicines whose object it is to effect a gradual change in the state and condition of the functions, secretions, &c., and establish the healthy habit which has somehow become deranged.

An alterative medicine, then, is supposed to be one which produces a new effect, and thus *alters* or diverts the attention of the system, if we may so speak, from the original disease; it is generally directed, or intended to act, upon the immediate seat of mischief, as the liver, the blood, &c. Small doses and frequent is the general rule with regard to the administration of alteratives, and in this way some of our most active and even poisonous drugs are employed to produce very beneficial results. It is properly through the medium of the excretions and secretions that alteratives act; they are taken from all classes of medicines, mineral as well as vegetable; thus, Mercury and Ipecacuanha, the former commonly combined with Chalk, as in the *Hydrargyri cum Creta* of the Pharmacopœia, and the latter with Opium and an alkali, as in the *Pulvis Ipecac. Comp.*, or Dover's powders, both of which see.

ALUMINA (Alum). The earth of Alum, or *Argil* (which see), forms the bases of clays and boles. The crystalized alum of commerce is a Sulphate of Alumina and Potash, or an Acetate of Alumina; it is very astringent, and is chiefly prescribed in diarrhœa and dysentery, especially when affecting children, to whom it may be given in doses of 10 grains or more, in mucilage, three times a day. It is sometimes, though rarely, given in *hæmoptysis* (which see), is used in injections and gargles, and lotions for foul ulcers. It enters into the composition of most of the powders or pastes used by bird stuffers and other preservers of animal specimens, being valued for its detergent and antiseptic qualities. Ground alum is largely employed by bakers. See *Adulteration*, *Bread.*

In the London Pharmacopœia will be found *Liquor Aluminis Compositus*, a powerful astringent lotion; and in that of Edinburgh, *Pulvis Aluminis Compositus*, recommended for chronic diarrhœa and hæmorrhages from the stomach and bowels, dose 10 to 40 grains. There is also a *Tannate of Alumina* recommended by some for injections. See *Astringents.*

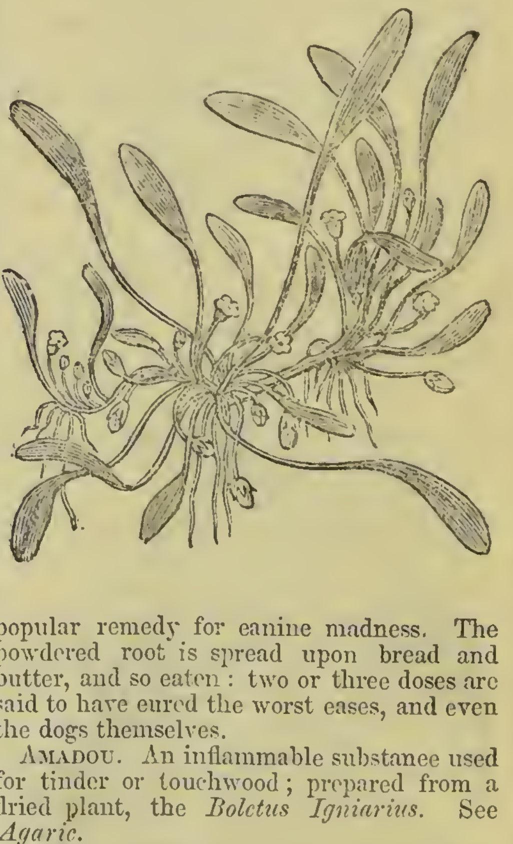
ALVEARIUM (from the Latin *alvearis*, a bee-hive). The meatus externus of the *Ear*, which see.

ALVEOLI (from the Latin *alvei*, channels). The meaning of *alveolar*, is, full of sockets or pits, like a honeycomb; hence the term *alveolar processes* has been applied to the sockets of the *teeth*, which see. By the above term is also sometimes understood the arteries and veins of these sockets.

ALVUS (Latin, the intestines), applied to intestinal evacuations; hence, also, *alvi-fluxus* (from *fluo* to flow) diarrhœa; and *alvine concretions*, calculi found in the *stomach* or *intestines*, which see.

ALYSMUS (Greek *alysmos*, from *alyo*, to be vexed). A term formerly used to denote anxiety or restlessness, chiefly affecting the præcordia, and accompanied by lowness of spirits.

ALYSSUM (The Madwort Plaintain); botannical name *Alysma Plantago.* In America said to be a specific for the bite of the rattle-snake. In Europe, the north especially, a popular remedy for canine madness. The powdered root is spread upon bread and butter, and so eaten: two or three doses are said to have cured the worst cases, and even the dogs themselves.



AMADOU. An inflammable substance used for tinder or touchwood; prepared from a dried plant, the *Boletus Igniarius.* See *Agaric.*

AMALGAM (from the Greek *ama* together, and *gameo* to marry). A mixture of two metals, one of which is always mercury; whereas, an *alloy* (which see) may be composed of any two metals. There is but one amalgam found in a natural state, which mineralogists call *native*, and that is of silver and mercury. Amalgams are of great use in chemical manipulations, and in various branches of the fine arts, gilding, refining, &c.; they are either liquid, soft, or hard; dependant, in some cases, upon the quantity of mercury employed, in others upon the nature of the metals amalgamated; they are generally white; all crystallizable; some are decomposed by mere exposure to the air, and all may be so by the application of a red heat, which drives off the mercury, and leaves the more fixed metals. The amalgam employed for exciting electricity in the machine, is composed of tin and zinc in combination with mercury. See *Electricity*.

Amanitine (from *amanite*, a mushroom), the poisonous principle of several of the fungi.

Amara (from the Latin *amarus* bitter). See *Bitters*, *Bitter Almonds*.

Amatorii Pathetici (from the Latin *amo*, to love, and Greek *pathos*, passion). A term applied to the superior oblique muscles of the *eye*, which see.

Amaurosis (from the Greek *amauros*, obscure). Loss of sight, proceeding from a paralysis of the optic nerve, which may be caused by disease of the nerve itself, or of that part of the brain with which it comes in contact. Amaurosis, generally comes on very gradually, with dimness of vision, and variations of colour, or floating objects, called *spectra* (which see). One symptom is dilation of the pupil and insensibility to light. This disease may be permanent or temporary, as it depends upon causes which are remedial or otherwise; it sometimes is occasioned by an excess of bile in the system, or a disordered stomach; and, in that case, resort would be first had to aperients and mercurials, such as a 5 grain Blue Pill at night, and a Senna, or as it is commonly called a Black-draught, in the morning, to be followed up by small doses of Calomel and Rhubarb, or Colocynth, according as the bowels are sluggish or otherwise. If the patient is strong, and of a full habit, he should keep to low diet and avoid malt liquor or spirits. Should the symptoms not yield to this treatment, blisters should be applied behind the ears, or a seton opened in the back of the neck or temple, as the fair presumption is that the mischief lies in the brain, or the nerve itself. See *Eye*.

Ambe (Greek *ambe*, the edge of a rock). An old machine for reducing *dislocations*, which see.

Amber (*Succinum*). A vegetable substance composed of a peculiar oil (*Oleum Succini*), an acid, (*Acidum Succinicum*), and resin. It is generally in small pieces, varying in colour from a light yellow, or nearly white, to a deep brown; it is hard, brittle, and most commonly translucent, takes a good polish, and, when rubbed, becomes electrical; indeed, from its Greek name *elektron*, is derived our word electricity. When bruised it exhales an aromatic odour, and when heated to 448° Fahrenheit, melts, and bursts into a bright flame; it is soluble in sulphuric and nitric acid, but is not acted on by water, and only gives out a portion of its resin to spirit.

The powder of amber is sometimes used in fumigations; the oil is given as an antisyasmodic in doses of from 5 to 10 minims on lump sugar, or in mucilage; and externally it is a stimulant and rubefacient, and therefore forms an ingredient in liniments and embrocations for rheumatism and paralysis. The active principle of *Roches' Embrocation*, so efficacious in hooping-cough, is Oil of Amber; acted on by strong nitric acid, this oil produces artificial musk; and the original *Eau-de-Luce* contained a portion of it. The Acid of Amber is sometimes given as an antispasmodic, dose 5 to 8 grains. See *Spasms*.

Ambergris (French *Ambre-gris*). A fatty substance found floating on the sea in warm climates, supposed to be a concretion formed in the stomach of the Spermaceti Whale; it is solid, opaque, of a bright grey colour, with minute lines of red and yellow. It is used chiefly as a perfume in the form of an essence or alcoholic solution; when heated with boiling spirit, until it is saturated, a peculiarly brilliant and white substance is produced, called *Ambergrin*.

Ambliaphia (from the Greek *amblos*, dull, and *aphe*, touch). Insensibility to touch or general feeling.

Amblosis (from the Greek *ambloo*), to cause abortion. See *Miscarriage*.

Ambulance (from the Latin *ambulo* to walk). A light caravan, furnished with surgeons' assistants and orderlies for attending the wounded on the battle field.

During the disastrous Crimean war, the readers of the illustrated papers had frequent opportunities of realizing the utility of these moveable field hospitals; several new ambulances were at that time invented and constructed, both by the English and French; some of them very complete in their arrangements and appointments, and the poor wounded soldiers had often cause to bless the humanity which planned, and the mechanical skill which constructed, these carriages for conveying their mutilated and agonized bodies to the more permanent hospital, where the gentle hand and the womanly heart of a Nightingale, that true "Sister of Mercy," waited to alleviate their sufferings.

AMBLYOPIA (from the Greek *amblos* dull, and *ops* the eye). Incomplete or incipient *amaurosis*, which see; and *sight*.

AMBON (from the Greek *anabaino*, to ascend), the margin of the sockets in which the heads of the large bones are lodged.

AMENORRHŒA (Greek *a* not, *men* a mouth, *rheo* to flow), morbid deficiency of the *Catamenia*, which see, also *Menstruration*.

AMENTIA (from the Greek *amens*, senseless). Imbecility of intellect. See *Idiocy*.

AMER (Greek, bitter). The bitter principle produced from silk by digesting it in nitric acid.

AMIANTHUS (Greek *a* not, and *mianio* to pollute). A mineral substance, consisting of delicate and regular fibres, perfectly incombustible, like *asbestos*, which see.

AMIDINE, OR AMYLINE (from the Greek *amidin* starch). A substance obtained by a solution of starch in water, and intermediate in its nature between gum and *starch*, which see. It is sometimes used for stiffening *bandages*, which see.

AMMONIA. A volatile alkali formed by the union of azote and hydrogen, most commonly seen under the form of *carbonate* and *subcarbonate*, the Volatile Salts of commerce, much used by confectioners to give lightness to their pastry by its free evolution of carbonic acid gas when subjected to heat. Its medical properties are absorbent, anti-acid, stimulant, diaphoretic, and anti-spasmodic; in large doses, emetic. It is given in convulsive disorders, gouty acidities of the stomach, nervous affections, debility, the flatulency and acidity arising from dyspepsia, and tho gastric affections which result from habits of intemperance and debauchery. Combined with opium, it is good in chronic diarrhœa, and, in large doses, in the muscular relaxation of long standing rheumatism; in hoarseness or a relaxed state of the throat and bronchial organs. It has been strongly recommended in *typhus fever* (which see); its use as a stimulant and restorative in *syncope* and *hysteria* (which see) in the form of Smelling Salts is well known. The dose of the Carbonate of Ammonia is from 5 grains to a scruple in Bitter Infusion, Camphor Mixture, or any convenient vehicle; the officinal preparations into which it enters are:—*Liquor of Subcarbonate of Ammonia*, dose, 20 minims to 1½ drachms; *Liquor of Acetate of Ammonia*, 2 to 6 drachms; *Ammoniated Copper*, ½ to 5 grains; *Liniment of the Subcarbonate of Ammonia*, for external use only. The second of these is a febrifuge and diaphoretic, often prescribed in combination with other medicines of its class. It is also a good application for bites and stings, and inflammatory eruptions.

The Aromatic and Fœtid Spirits of Ammonia (*Spiritus Ammoniæ Aromaticus et Fœtidus*) of the Pharmacopœia, are both much used as nervous stimulants and antispasmodics, dose, ½ a drachm to a drachm in Water or Camphor Mixture; they are valuable additions to tonic mixtures, the former, especially, for lowness of spirits, and the latter where there is flatulency. The *Strong Liquor of Ammonia* is too caustic for internal administration, but is sometimes given, as is also the common Hartshorn (*Liq. Volatile Cornu Cervi*) in hysteria, &c. Most usually and properly, however, these preparations are employed for external application only; their pungent vapour is applied to the nostrils of fainting persons, and they are mixed with oleaginous and other substances for liniments to produce counter irritation. See *Liniments*.

The Compound Tincture of Ammonia (*Tinctura Ammoniæ Compositus*) is composed of gum mastic, oil of lavender, rectified spirit, and strong solution of ammonia: this is the old *Eau de Luce* with the Oil of Amber omitted; it is a good stimulant and antispasmodic, dose, from 5 to 10 minims in water. There are several other ammoniated tinctures in the Pharmacopœia, such as Castor, Colchicum, Guaicum, Opium, and Valerian, see *Tinctures;* and various other officinal preparations into the composition of which ammonia enters, such as Ammoniated Iron (see *Iron*), Ammonio-chloride of Mercury; (see *Mercury*, *White Precipitate.)* Acetate, Citrate, and Tartrate of Ammonia; these neutral salts are all used as diaphoretics, are given in febrile diseases, and in *Dropsy* and *Rheumatism*, which see. The Acetate as well as the Carbonate and Pure Ammonia, are sometimes taken by drunken persons to recover them from the effects of their potations; the former is now only given in the form of *Liquor Ammonia Acetatis*, already spoken of: the popular name of this was formerly *Spirit of Mindererus*.

The other ammoniacal salts employed in medicine are—the Nitrate, Nitro-sulphate, Phosphate, Sulphate, Hydro-sulphuret, and Succinate of Ammonia; the first is refrigerent and diaphoretic, dose, from 3 to 20 grains; equal parts of this and Carbonate of Soda forms a powerful freezing mixture (see *refrigerent) ;* the second is given in typhoid fevers, dose, about 12 grains; the third is good in some cases of rheumatism, dose, 3 to 10 grains; the fourth is diuretic, stimulant, and resolvent, dose, 15 to 30 grains;

the fifth is poisonous in large doses; in small, say from 4 to 8 drops, it is good in catarrhal complaints, diabetes, and gout; the sixth is antispasmodic, it is usually given in the form of *Liquor Ammonia Succinatus*, dose, from 5 to 10 drops. The Hydrochlorate, or Muriate of Ammonia, is an article much used by braziers and some other workers in the useful arts, under the name of *Sal Ammoniac;* it is given in inflammation of the mucous membrane, when the more active stage has passed, and in chronic bronchitis; also in intermittent fever, and chronic enlargement of the prostrate, dose, from 5 to 20 grains every three or four hours; its action requires to be carefully watched in persons of feeble constitutions, and those subject to hæmorrhages. It makes a good lotion for indolent tumours and chilblains, mixed with Nitrate of Potash, or Saltpetre, is powerfully refrigerent, and may be employed with advantage in *Gargles*, which see.

Ammonium. The supposed metallic base of ammonia.

Ammoniacum. Commonly called *Gum Ammoniac*, a resinous gum which exudes from the *Dorema Ammoniacum*, called by the Persians *Oshac*, a plant of the natural order *Umbelliferæ*. It is commonly found in little irregular fragments called tears or drops (*Guttæ Ammoniaci*) of a pale yellow colour on the surface, but white within; of a bitter flavour, and faint but not unpleasant smell. Sometimes it is in larger lumps, and is then called *Lapis Ammoniaci*,—this is its more impure state, in which it is often adulterated with resin.

This gum is stimulant, antispasmodic, and expectorant; in large doses gently purgative, and sometimes diuretic; it is useful in asthma, hooping-cough, visceral obstructions, and in some stages of phthisis, and in mesenteric obstructions, after the exhibition of gentle aperients. Dissolved in nitric acid, it is given with great advantage to promote expectoration, where large accumulations of phlegm are present; while externally it is useful as a discutient and resolvent in scirrhous tumours and indolent ulcers. Its chief officinal compounds are Mixture of Ammoniacum; dose, ½ to 1 ounce; Compound Squill Pill, 10 grains to 1 scruple; Plaister of Ammoniacum with Quicksilver, and Gum Plaister. Rubbed down with cold water, which would seem to be its proper solvent, it makes a milky fluid, and if to a pint of this be added the yolk of an egg, with 2 drachms of Tincture of Squills, and half an ounce of Syrup of Poppies, and the same of Paregoric Elixir, it makes an excellent cough mixture. See *Asthma*, *Coughs*, *&c.*

Ammonita or Cornu Ammonis. A part of the brain, otherwise called the *Pes-hyppocampi*, which see, and *Brain*.

Amnesia (from the Greek *a* not, and *mnesos* memory). Forgetfulness; loss of *memory*, which see.

Amnium (from the Greek *amnus* a lamb). The internal membrane of the *ovum* (which see) being that which immediately surrounds the *fœtus* (which see). The *Amnic Liquor* is the fluid contained in this membrane; and a weak acid discovered in the *Liquor Amnic* of the cow, has been called *Amniatic Acid*. See *Childbirth*, *Womb*.

Amomum. A genus of plants bearing aromatic seeds, several of which are used medicinally. See *Cardamums*, *Ginger*, *Turmeric*, *and Zedoary*.

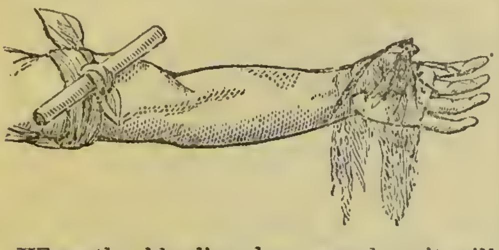
Amorphous (from the Greek *a* not, and *morphe* form). Shapeless, irregular, rude, rough, applied to inorganic substances in their natural state.

Amphi (Greek, signifying both). Its compounds are *amphiarthrosis* (*arthrosis*, articulation), a mixed kind of *articulation*, (which see). *Amphibia* (*phios*, life,) animals which can live both on land and in water. *Amphimerina* (*emera*, a day,) a term applied to a quotidian or daily ague.

Amphoric Resonance (from the Latin *amphora*, a vessel). A sound in the chest like that produced by blowing into an empty bottle. See *Auscultation*, *Chest*.

Amputation (from the Latin *amputo*, to cut off.) The removal of a limb, or other part of the body. In a book like this, intended altogether for popular use, it would be folly to enter at all fully into the details of an operation which no unprofessional person would think of attempting, except under circumstances of a most extraordinary nature. Nevertheless, a few simple rules may be laid down for the guidance of the reader, should he ever be placed in a situation to require their application. The severance of a finger or a toe, or even a larger limb, or member of the body, may be caused by accident, and occur when and where the assistance of a surgeon cannot be obtained. The first thing to be guarded against, in such a case, is death by hæmorrhage or bleeding. If there is much of this, a handkerchief, or strong band of some kind, should be tied round any portion of the limb that may be left, as near to the bleeding point as possible, and pulled very tightly; if it can be near the trunk of the main artery, and a pad be placed directly over that, so much the better. Do not attempt to wash the bleeding surface, nor cover it from the air, until the hæmorrhage has stopped;

above all things do not bathe it with warm water, and let the patient lie in such a position as to elevate it above the rest of the body; should it be found impossible to tighten the band sufficiently by means of the hands only, insert beneath it a short piece of stick, and by turning this round, so as to twist the band, almost any amount of pressure may be obtained. See *Tourniquet.*



When the bleeding has ceased, as it will be almost sure to do, if these means be adopted, just cover the wounded part slightly with a piece of soft linen or cotton; if this cannot be obtained, make the patient as comfortable as possible, and await the surgeon's arrival, if there is a possibility of obtaining one, should there not be, an attempt to tie the arteries must be made, as the compression necessary to stay the bleeding could not be kept up for a very long period, without producing mischievous results from the impeded circulation. A slender hook, or a small pair of pointed forceps should first be procured, and then, the lacerated part being placed in a convenient position, and the bandage loosened, the position of the arteries which are likely to bleed may be noted by the emission of the arterial blood, which is of a bright red colour; each thread-like artery should then be taken hold of gently, but fimly, and drawn out sufficiently far to allow of a piece of fine silk being tied tightly round it: this is a delicate operation, and often requires much time and patience even on the part of the skilful surgeon; but it may be accomplished by any one who has a quick eye and a steady hand, in addition to the above requisites—or, rather, by two, for one should hold the artery while another ties it. The cessation of the flow of blood will indicate whether the work has been done effectually, but even when it has, the band should not be taken off, but left so that it can be drawn tight on the instant, should hæmorrhage come on again. In some cases it might be necessary for a non-professional person to complete the severance of a limb, the bone of which had been crushed; he should apply the band before doing so, and cut with a sharp knife, boldly, dismissing from his mind as much as possible all thought of the suffering occasioned by the operation; if the patient seems likely to sink under the agony and loss of blood, restoratives should be administered, brandy is about the best, and generally the most easily procured; but if he bears it well, it is best to avoid spirits for fear of increasing the inflammatory action, which is pretty sure to be set up in the wounded part, and spread through the system: low diet is best as a general rule, quiet, and a recumbent position, as many comforts as circumstances will allow, constant watchfulness on the part of those attending, and a cold water dressing for the wound until all fear of inflammation is at an end; then nourishing food with slightly stimulating drinks; and, for the rest, see *Wounds.*

AMYLIC ACID. A volatile acid, prepared by digesting moistened starch with *Peroxide of Manganese.*

AMYLUM (Starch), from the Greek *a* not, and *mylos* a mill, prepared without a mill. This is a substance found largely in wheat and other farinaceous plants, such as the potato, arrowroot, &c. It is demulcent and slightly nutritious; externally it is a good absorbent, and is much used for dusting over the body to absorb irritant secretions, especially for children; every nurse is acquainted with the value of Infant's Powder, which is but powdered starch, scented or not, as the case may be. In enemas where there is an irritated state of the rectum, starch is useful; mixed with carbonate of soda, it may be recommended for some skin diseases. To poisoning by Iodine it is a perfect antidote, if it can be taken in time. In the Pharmacopœia there is a Decoction or Mucilage of Starch, and also a Lozenge. For medical purposes, wheat starch is generally used; that from the potato, arrowroot, &c., being more frequently employed as an article of *diet*, which see; also *Farina*, *Feculæ.*

AMYRIS (from the Greek *myron*, myrrh). A genus of fragrant resinous plants, of the natural order *Terebintaceæ;* the species best known to us as medicinal are *Amyrus Elemifera*, producing the *Gum Elemi; A. Gileadenseis*, the resinous juice of which is called *Balsum of Gilead*, or *Mecca;* and *Balsamodendron Myrrhæ*, yielding, *Gum Myrrha*, all of which see.

ANA (same as *Aa*), from the Greek, signifying of each, used in *Prescriptions*, which see.

ANÆMIA (from the Greek *a* not, and *aima* blood), want of blood. This is a condition of the constitution in which there is a deficiency of the red globules or colouring matter in the blood; it is marked by extreme pallor in those parts, such as the lips, which are generally suffused; and is not uncommon in young females of a weak or scrofulous habit. It appears to arise from a deficiency of vital energy in the system, either constitutional, or brought on by want of nourishment, breathing impure air, or great loss of blood. In any case a cure may be effected by good generous diet, pure air, moderate exercise, and strengthening medicines. Any of the various preparations of *Iron* (which see) may be taken, in combination, if the appetite be bad, with some bitter tonic, such as Infusion of Gentian, with a little Quinine. Should there be much emaciation, Cod Liver Oil, taken in Orange Wine, will be of service. The pores of the skin should be kept open by tepid sponging, and the bowels moderately so by a Rhubarb or Colocynth pill now and then. Strong purgatives should be avoided, and especially salines. In young females the absence of the monthly discharge need cause no uneasiness; with returning strength that will most likely return; should it not do so, however, when this treatment has been persisted in for a time, and should the pallor, languor, sleeplessness, headache, confined bowels, swelling of the feet, &c., which generally distinguish *Anæmia*, continue, a medical man ought to be consulted, as it is likely there may be consumption, or other organic disease, at the root of the mischief. See *Chalybeates*, *Chlorosis*, *Iron*, *Tonics*.

Anæsthesia (from the Greek *a* not, and *aisthesis*, perception). Loss of feeling, or sensation. This may result from disease, or be brought about by the inhalation of chloroform or ether; or locally by the application of ice, or intense cold. See *Freezing*.

Analepsis (from the Greek *ana*, again, and *lambano*, to take). Recovery of strength after sickness.

Analysis (Greek *ana* again, and *lyo* to solve). The re-solution of compounds into their original parts—the opposite of *synthesis*, which see. That which secret poisoners have now most to dread is chemical analysis; it has been shown that the skilful analyser can detect the 1000th part of a grain of arsenic in the decomposed viscera of a human body, and demonstrate its presence too. Several recent cases of death by poison have proved the importance of the chemists evidence in judicial inquiries, and although it is not so easy to ascertain the presence of vegetable, as of mineral poisons, yet even these, by a delicate series of tests and manipulations, may in very many instances be discovered. But this, although a very important part of the analyst's operations, is, perhaps, not the most so; his inquiries into the chemical constitution of the various productions of nature, lead to great results, as to their utilization in the social economy of daily life.

Anasarcha (Greek *ana* through, and *sark* the flesh). A scientific term for *Dropsy*, which see.

Anatomy (Greek *anatomus*, to cut up). The art or science of dissecting organized bodies, for the purpose of ascertaining their internal structure; hence, the anatomist is a dissecter, it may be, of plants, or of animals, although the term is most usually applied to one who directs his attention more especially to the latter; and if he examines into the structure and organization of the whole animal kingdom, for the purpose of comparison, of classification, and arrangement, he is called a *comparative* anatomist, such was our John Hunter, and the great French naturalist, Cuvier; while Liston and Sir Astley Cooper were simply anatomists, or as we should commonly term them *Surgeons*. See *Surgery*.

Anatomy has been described as 1st, *Simple*, that which treats of the healthy state of the organs; 2nd, *Morbid*, or *Pathological*, that which treats of diseased states, or alterations of the structure; 3rd, *Descriptive*, that which relates to the parts as displayed by the scalpel; 4th, *General*, that which relates to the tissues, or elementary composition of parts; 5th, *Surgical*, that which teaches the relative situation of parts; 6th, *Comparative*, that which relates to the anatomy of the lower animals; 7th, *Transcendental*, relating to the mode, plan, or model upon which the animal frame or organs are formed. Most commonly, however, there are but two great divisions of anatomy spoken of, viz.: 1st, *General*, having regard to the various features and portions of the body: and 2nd, *Structural*, relating to the intimate connection and structure of the various substances, as determinable by a very close investigation, in which the microscope is now generally used. Barclay divided the second under eight heads or aspects; and other anatomists have adopted arbitrary arrangements, with which we need not trouble our readers. Neither shall we enter here upon a description of that of which anatomy treats, viz.: the human body; for which see *Skeleton*.

Anaudia (Greek *a* not, and *aude* speech), deprivation of voice. See *Catalepsia*, *Dumbness*.

Anethum (Dill). The aromatic seed, or fruit of *Anethum graveolens*, belonging to the natural order *Umbelliferæ*. It is mildly stimulant and carminative, and much used in flatulency, especially for children, and as a vehicle for active purgatives, to correct their griping effect. The Dill Water of the shops is, generally, made by rubbing down the Oil of Dill with sugar or magnesia, adding water and filtering: the proportion is about one drop of oil to one ounce of water. The dose is from half an ounce to two ounces for adults; and from a teaspoonful to a dessert spoonful for children. See *Carminatives.*

ANCHYLOSIS (Greek), a stiff joint, caused by the union of two separate bones by fresh osseous matter formed between them. This union may be, in medical phrase, either *true* or *false;* in the former case it is formed of lymph thrown out by two ulcerating surfaces, blending together in one mass, and becoming organized; in the latter, it is merely a jointure of the ligaments, which becoming stiff, results in immobility of the joint. If the stiffening of the joint is complete, there is no remedy for it; if, as is ometimes the case, it is only partial, warm salt-water bathing, with daily attempts at movement, and friction with Cod-liver or other oil, may do much towards a restoration of the limb to its former state of usefulness.

ANEURISM (from the Greek *aneurymo*, to dilate). The dilation of a vessel or vessels so as to produce a rupture. Hence we have *A. Cordis*, the dilation of the heart; *A. Verum*, the uniform dilation of all the coats of an artery; *A. Spurium*, the dilation of an artery in one direction only from disease of its coats; *A. Varicosum*, the disease which arises when the lancet passes through a vein, and wounds the adjoining artery; *A. Anastomosis*, a tumour formed by enlargement of numerous vessels.

Aneurism has been defined by Sir Astley Cooper as "a pulsating tumour, containing blood, and communicating with the interior of an artery." To this definition, as this eminent surgeon admits, there is one exception, "namely, where aneurism, as is sometimes the case, takes place near the heart."

Aneurisms may be internal or external: in the former case being so situated in the cavities of the body, as in the abdomen, chest, or cranium, as to render the nature of the disease often very doubtful; in the latter, they are so placed in the limbs that access may be easily had to them. The whole arterial system is liable to aneurisms; but they occur much more frequently internally than externally, and oftener, according to some authorities, in those main trunks near the heart, than elsewhere: they usually occur in persons of advanced age, such being most liable to calcareous depositions of the coats of the arteries, which are among their predisposing causes, with which may also be named, violent contusions, abuse of spirituous liquors, frequent use of mercurials, fits of anger, extension of the limbs, straining, and violent exertion of any kind; gunshot, and other wounds, also frequently cause aneurisms, which few persons long addicted to intemperate habits escape.

Symptoms of an aneurism. In the early stage there is a small tumour, pulsating very strongly, more or less evident to the sight and touch according to the depth at which it is seated. Sometimes its presence is only known by the rapid pulsation, and pain, and tenderness of the part: sometimes, only as it interferes with the functions of some important organs, producing impeded respiration, cough, and other distressing symptoms, and ending in death; for which, without a post mortem examination, the physician can assign no adequate cause. For the internal form of the disease no remedial measures can be advised; they depend so much upon situation, and other varying circumstances, that only the medical practitioner can judge of the means to be employed.

Treatment of external aneurisms. This must also depend very much on circumstances. They are often formed on the principal arterial trunks of the upper and lower extremities, or of the neck, as in the carotid: the pulsating tumour, at first filled with fluid blood, which can be pressed out if the finger is passed gently along it, gradually becomes firmer and harder, assuming the character of a solid swelling, retarding the circulation by pressure on the surrounding parts, and causing muscular spasms, cramps, and sudden twitchings. If situated near the joint of a limb, the motion thereof becomes impeded, and inflamed swelling of the whole part often ensues ; the cuticle covering the aneurism assumes the appearance of a blistered surface; finally, the sac opens, blood issues forth, which continues to flow from time to time, and the patient dies from weakness occasioned by loss of blood, or by the setting in of gangrene, which spreads up the limb, should it not be timely removed, and so causes death. Pressure upon the artery, so as to stop the flow of blood into the sac, has been recommended of late; but it causes greater pain than can be generally endured, and does not appear to have answered in the majority of cases in which it has been tried. A surgical operation appears to give the best chance of a cure; and this, which consists in dividing and tying the artery on which the aneurismal tumour is situated, can be attempted by no unprofessional person.

No external irritant liniment or friction must be applied in aneurism; nor fomentations and other hot applications. When the bleeding has commenced, the strength must be sustained by good nourishing diet; but, until it has, it is best to keep the system low: active exertion must be avoided, both mental and physical, and also pressure upon the part affected. In *Varicose Aneurism*, often caused by a wound in the brachial artery (in *Venesection*, which see,) there is usually a tumour situated at the bend of the arm, which generally proceeds to about the size of a walnut or pigeon's egg, and then remains stationary, causing some inconvenience, but resulting in no very serious consequences; the limb is, perhaps, weakened, and there is a peculiar and unpleasant vibrating thrill felt, or communicated to the ear, called by some writers a *rilling* noise. For this form of the disease no operation is necessary, as it is for several other forms. See *Arteries*, *Varia*, *Varicose Veins*.

ANGELICA. Botanical name *Angelica Archangelica*, a plant of the natural order *Umbelliferæ* or *Apiaceræ*, the seeds, leaves, stalks, and roots of which possess stimulant, carminative, and tonic properties, which are strongest in the latter. It has a pungent taste and an agreeable, aromatic odour.

Dose, of the powdered root, from 10 to 20 grains ; Distilled Water 1 ounce ; Extract, from 5 to 15 grains ; Infusion, a tablespoonful or more ; Tincture, a drachm ; Spirits, from half a drachm to 3 drachms. The confectioners prepare a sweetmeat of the root with sugar, which is pleasant to the taste and agreeable to the stomach. See *Carminatives*.

ANGINA (from the Greek *agko*, to strangle), a name given to several diseases of the organs of the throat ; thus, we have *A. Tonsillaria*, an affection of the *Tonsils* (which see) ; *A. Maligna*, malignant *Sore Throat* (which see) ; *A. Trachealis*, sometimes called *Tracheitis*, inflammation of the *Trachea* (which see) ; also *Croup* ; *A Parotidea*, inflammation of the parotid and submaxillary glands (see *Mumps*).

ANGINA PECTORIS (from the Latin *Pectus*, the breast), a disease which is commonly connected with ossification, or other morbid affections of the heart ; it is characterized by a sudden and most violent pain across the chest, which extends down the arms, and seems to threaten immediate dissolution. It sometimes comes on during rest, but most usually after violent exertion ; the paroxysm does not commonly last long, but it has been known to continue for an hour or more. It is not much under the controul of medicines, but may be sometimes greatly relieved by rubbing over the seat of pain, warm applications, and the administration of *antispasmodics*, (which see.) An anodyne combined with Ammonia has sometimes been found very effectual in relieving the spasm; the following is a good formula:—Fœtid Spirits of Ammonia half an ounce; Solution of Morphine 3 drachms; Camphor Mixture 6 ounces. Take a table spoonful every half-hour until relieved. If the paroxysm is very violent, a little hot brandy and water may also be taken. In the intervals between the attacks, the system should be strengthened as much as possible, and care taken to keep the patient quiet; excitement, either physical or mental, is likely at any time to bring on the pain. An issue over the seat of the disease is sometimes of great service, and an application of Vitriolated Zinc has effected a cure. See *Heart disease*.

ANGIOLOGY (Greek *aggeion* a vessel, and *logos*, a discourse). The science of the vascular system. See *Veins*.

ANGULAR (Latin *angulus*, an angle). The name of the facial vein when it reaches the side of the nose near the *Eye*, which see, and *Veins*.

ANGURSTURA or CUSPARIA. The bark of the *Galipea Cuspari*, a plant of the natural order *Rutaceæ*, has been used in tropical climates as a substitute for Cinchona. In Europe it has been employed to some extent in atonic dyspepsia, chronic diarrhœa, and dysentery. Dose, of the powdered bark 5 to 30 grains; infusion, 1 to 2 ounces; tincture, 1 to 2 drachms.

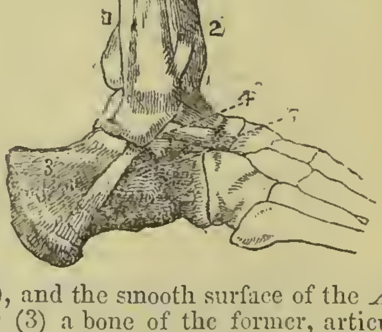
ANIMALCULES (abbreviation of animals), living creatures which can only be seen by the aid of the microscope, which exist in water, and all fluids impregnated with animal or vegetable matter; they are often termed *Infusoria*: some discovered in the *semen* are termed *Spermatic*, and others have names given to them from the various liquids in which they exist. See *Water*.

ANIMATIZATION, the process by which food is assimilated or converted into animal matter. See *Aliment*, *Food*.

ANIME GUM. A resinous substance procured from the *Hymenæa Courbaril*, used in fumigating compositions, and *Plaisters*, which see.

ANISEEDS. The seeds or fruit of the *Pimpernella Anisum*, a plant of the natural order *Umbelliferæ*, of stimulant and carminative properties, good for flatulency, indigestion, and colic, particularly in infants. Dose, of the powdered seeds 10 to 30 grains; infusion or distilled water, a wineglassful; compound spirit 1 to 4 drachms; essential oil 4 to 20 drops on sugar. See *Carminatives*

ANKLE. This is the joint which connects the foot with the leg, it is called a hinge joint, and is formed of the extremities of the large and small bones of the latter



(1, 2), and the smooth surface of the *Astragalus* (3) a bone of the former, articulated together, and kept in their places by strong ligaments (4, 5).

The Ankle-joint from its position is peculiarly liable to a strain or dislocation, or fracture of the small bones which form its points of unity; and there is often considerable difficulty in ascertaining the precise nature of the injury which it has received, on account of the swelling and inflammation which commonly sets in soon after it is done. Should it be simply a *sprain*, or *strain*, let the course directed in such cases be pursued. If it is a dislocation, as may generally be known by the foot hanging down in a distorted position, a surgeon ought to be sent for; should the aid of such not be procurable, an attempt to reduce it should at once be made. Place the patient in a recumbent position, and grasp the leg firmly just below the calf, holding it so that it cannot move; then let another person take hold of the foot with both his hands, by the heel and instep, and pulling it out as as far as his strength will permit, turn it gently into its proper position; he will generally, after a little manipulation, feel it slip into the socket, and will know by the more natural appearance of the foot, that his object is effected; if, however, much time is lost, and the parts get swollen and inflamed, the operation becomes more painful and difficult. When it has been successfully performed, the part should be carefully, but not too tightly, bound with a bandage steeped in vinegar and water, or refrigerant lotion of some sort, and kept quiet for a week or more; after that it may be rubbed with stimulant liniment, such as Hartshorn and Sweet Oil, or Opodeldoc and Liquor of Ammonia; but this must not be done until the swelling is reduced.

Distortion of the Ankle is not uncommon in weakly children, and frequently it is not noticed until the bones have become altered in shape, and even the spine is affected; it then requires a long course of treatment and the most careful attention to correct the deformity: boots made in a particular way, according to the requirements of the case, and leg-irons are sometimes used for the purpose, but not often with happy results. The best plan is to strengthen the system as much as possible with good nourishing diet, prohibit the child from standing long, or at all, in other than a proper position. A stout elastic sock or stocking may be worn with advantage, and the boots, which should be of cloth and come well up the ankles, should have the sole made thicker on the side towards which the foot inclines, so as to throw it in an opposite direction: bathing the ankles every morning with cold salt water, and rubbing them afterwards with a coarse towel, will help to stimulate and strengthen them. Even when children are born with distorted ankles, much may be done in this way to correct the deformity, although no plan of treatment is always successful. See *Club-foot*, *Dislocation*, *Joint*, *Sprain*, *&c.*

ANNULUS (Latin, a ring), from whence comes *Annular*, as applied to bones, cartilages, and various processes of the human frame, as *A. Foraminis*, the muscular margin of the *Foramen Ovale*, and *A. Ovalis* the ring which surrounds the *Fossa Ovalis*. See *Ovarium*.

ANODYNES (from the Greek *a* not, and *odyne* pain). Medicines which assuage pain; generally *Opiates*, or *Narcotics*, (which see). These medicines act by diminishing sensibility and inducing sleep, or a state of stupor, which is near akin to it. The following is a list of the medicines of this class which are principally used, with their doses; a full account of their nature and uses will be found under their several heads. Camphor, 5 to 20 grains; Compound Spirits of Sulphuric Ether, half a drachm to 2 drachms; Extract of Aconite, a quarter to three-quarters of a grain; of Belladonna, half a grain to 2 grains; of Conium, 3 to 20 grains; of Digitalis, half a grain to 1 grain; of Hyoscyamus 2 to 10 grains; of Lettuce, 3 to 10 grains; of Hop, 5 grains to 1 drachm; of Opium half a grain to 5 grains; of Poppy, 2 to 20 grains; of Stramonium, 2 to 10 grains; Morphine, Acetate and Muriate of, from a quarter to half a grain. Pills of Conium, of Opium, of Ipecacuhana with Opium, of Soap with Opium, and several other Pills into the composition of which opiates enter, may be included; the dose is generally from 5 to 10 grains. Powders of Burnt Hartshorn, and of Chalk with Opium; dose of the former 5 to 20 grains, of the latter 1 to 2 scruples. Compound Powder of Ipecacuhana, commonly called Dover's Powder, 5 to 20 grains, and Tobacco, dried leaves, half a grain to 1 grain, seldom used. For children, Syrup of Poppies and Godfrey's Cordial are much used, the latter especially, to a very mischievous extent. The custom which prevails among the poor classes of giving their children "sleeping stuff" to keep them quiet, commonly, even when they have no disease, the pain of which requires alleviating, is most reprehensible: the children so drugged often grow up with impaired mental if not physical powers. Opiates should always be given with great caution, to the young especially; in the earlier stages of life they are seldom really needed. Like most of the wise Creator's gifts, they are a great blessing when properly used, but too often turned by abuse into a curse, as the examples of excessive tobacco smokers and opium eaters frequently prove. In many acute and some chronic forms of disease, when the frame is racked with pain, or the brain excited to unnatural activity, it is often necessary to administer anodynes, and their soothing effect is felt like a foretaste of heaven. To the aged, who are weary and yet wakeful, they are sometimes a balm and a consolation, which it would be cruel to deny them; but, as we said before, the child seldom requires them, and if given at all, it should be only in the mildest form, unless under the direction of the medical adviser. Besides the above named forms of administration, there are also anodyne *Enemas*, *Fomentations*, *Inhalations*, and *Plaisters*, all of which will be spoken of under their proper heads.

ANOMALOUS (Greek *a* not, and *omalous* even), irregular, applied to the menses and other interrupted periodic actions.

ANOREXIA (Greek *a* not, and *orexis* appetite), loss of appetite.

ANORMAL (Greek *a* not, and *normus*, natural), contrary to rule, unnatural.

ANOSMIA (Greek *a* not, and *osme*, odour). Loss of the sense of *Smell*, which see.

ANTERIOR (Latin, before), as applied to *Muscles* and *Nerves*, which see.

ANTEVERTIO UTERI (Latin *ante*, before, and *verto*, to turn), a morbid inclination of the *fundus uteri* to fall forward: the opposite of *Retrovertio* which see, and *Uterus*, *Womb*.

ANTHELMINTICS (Greek *elminthus*, a worm). Medicines which procure the evacuation of worms from the stomach and intestines. These mostly act mechanically, dislodging the worms by the roughness of their particles, or by their cathartic operation. Some appear to owe this beneficial action wholely to their bitter properties, which prove noxious to the creatures, or by restoring the tone of the stomach and removing that debility of the digestive organs which prevented the proper assimilation of food, and conduced to the generation of the animals. Anthelmintics are best administered upon an empty stomach, hence it is common to prepare the way for them by an emetic: for a list of the principal of them with their doses, see *Vermifuges*, *Worms*.

ANTHEMIS (Camomile). The dried flowers of the common camomile *(Anthemis Nobilis)* belonging to the natural order *Compositæ*, are sufficiently familiar to every one. They have stomachic and tonic properties, which render them very useful in dyspepsia and general debility. Camomile tea, as the infusion is generally called, is a most agreeable bitter, and is of almost universal use and acceptance. Taken warm it promotes the action of emetics. The flowers steeped in boiling water are frequently used as fomentations for abscesses and inflamed parts, to promote suppuration and relieve pain; flannels dipped in the hot decoction answer the same purpose. Of the powdered flowers, from 5 to 10 grains may be given; of the infusion from 1 to 3 ounces; of the extract from 5 to 20 grains; distilled water 1 to 8 drachms; volatile oil 1 to 4 drops.

ANTHRACOKALI and A. SULPHURETUM. These are certain compounds not recognized as officinal, yet sometimes employed as alteratives in herpatic eruptions, and in scrofulous and rheumatic affections. The dose is about two grains three times a-day.

ANTHRAX (Greek for a burning coal) a dusky red or purplish kind of tumour, frequently occurring in the neck, and having its origin in the absorbent glands; treated the same, and considered by most medical authorities as a *carbuncle*, which see.

ANTI, against, a Greek word although adopted into the Latin language, and much used as a prefix to medical and other scientific terms; thus, in anatomy we speak of *Anti cardium*, over against the heart, meaning the *scrobiculus cordis* or pit of the stomach; *Anti cheir*, against the hand, the thumb; *A. enemion*, against the calf of the leg, the shin-bone; *A. helix* the part of the ear opposite the curl or twist; *A inial*, an aspect of the head opposite to the occiput;

A lobium, against the *lobus*, or inferior soft part of the ear; *A. thenar*, a muscle which extends to the thumb, after which it is named; *A. tragus*, a prominence of the ear opposite the tragus, connected with a muscle called *A. tragicus*. These all have reference to *situation;* other words there are with this prefix which relate to opposite *action* as *Antagonist* (from the Greek *agon*, a struggle), appled to a muscle which acts in opposition to another; *Antipathy* (Greek *pathos*, affection), aversion; *A. peristaltic* (Greek *peristello* to contract), a motion contrary to the *peristaltic*, which see.

Then again we find it applied to the operation of remedies good against disease, as may be here seen.

Anti-Acids. Medicines which are intended to correct acidity of the stomach and bowels; their action is purely chemical; they combine with the acid and neutralize it, but do nothing to prevent its regeneration; therefore they are simply palliatives, and cannot be depended upon for restoring the tone of the impaired organs, whose powers, a long continuance of them is apt to enfeeble. Ammonia, Chalk, Lime, and all cretaceous matter, Magnesia, and the alkalines Potash and Soda, are the chief anti-acids, or *absorbents* (which see). These are many forms of preparations, but the action is pretty uniform. Ammonia in its various combinations, where acidity in the stomach exists with flatulency and tendency to *cramp* or *colic* (which see). Magnesia and the preparations of Chalk or Lime, are best when acid is present in the bowels, causing loose evacuations, griping pains, &c., and this because they pass down the alimentary canal, and into the seat of mischief, without loosing their absorbent powers. Where an alkaline test shows acidity in the urine, preparations of Potash are most suitable for administration, as they are more readily soluble than Soda, which in combination with Ginger, may be recommended for the unpleasant sensation in the chest and throat, called *Heartburn* (which see) that being the result of excessive acidity.

Anti-arthritics (from *arthritis*, Gout, (which see), remedies used for rheumatic and gouty affections of the joints and extremities, &c.

Anti-convulsives. Medicines which act specifically upon convulsive diseases, such as *Epilepsy*, *Chorea* (which see). They are mostly too powerful to be used by other than skilful hands, comprising the preparations of *Silver*, *Arsenic*, and *Zinc*, which see.

Anti-periodics. Used to combat periodic diseases, such as *Ague* and *Intermittent Fevers* (which see), the preparations of *Cinchona*, *Zinc*, and *Arsenic* are those chiefly used.

Anti-phlogistics (from *phlogon* to inflame). Remedies which reduce the heat of the system by acting upon the heart and larger vessels; they are used chiefly in fevers and inflammatory disorders. See *Febrifuges* and *Refrigerants*.

Anti-scrofolics, good against *scrofula*, (which see), also *Cod-liver Oil*, *Iodide of Potassium* and *Sarsaparilla*.

Anti-spasmodics. As spasms may arise from a variety of causes, so must the remedies for them be numerous and diverse in character; thus narcotics, sedatives, stimulants, nauseants, aperients, stomachics, tonics, blood-letting, the hot bath, and application of dry heat, all, at different times, come under the above denomination; but as the immediate cause of spasms is commonly wind in the internal cavities or passages of the body, those medicines, which have a direct action thereon are especially antispasmodic; such are Assafœtida, Valerian, Galbanum, Ether, essential oils of Mint, Anise and Dill, Ginger, Spirits of Ammonia, Brandy, all of which see.

Anti-sepronics are those medicines which have a peculiar and specific effect upon sealy diseases of the *skin*, which see. The chief of them is *Arsenic*, which see, also *Skin Disease*.

Antiseptic is that which has the property of retarding putrefaction; here we have to do with antiseptic medicines, which may be classed under four heads, viz.—*True Antiseptics*, such as Peruvian and Angostura Bark, Camomile, &c., which act as preservatives by strengthening the tone of the stomach, and being suitable for every condition of body, are preferable to all others for relaxed habits; we shall say more of these under the head of *Tonics*: 2, *Refrigerating Antiseptics;* best adapted for the young and robust, especially if of plethoric habit, see *Acids;* 3, *Stimulating Antiseptics*, such as Wine and Spirits, and warm and nourishing dietetic preparations, such as are required by the old and debilitated; see *Stimulants:* 4, *Antispasmodic Antiseptics*, such as Camphor and Assafœtida, suitable for irritable and hysterical habits. See *Antispasmodics*. In relation to their preservative effects upon morbid animal matter, Salt, Lime, Charcoal, Vinegar, and Camphor may be named as the greatest antiseptics known; Chlorine gas also should be included in this list, which contains what are generally considered as the most powerful of *disinfectants*, which see.

ANTIDOTES are capable, if employed in time, of averting the fatal effects of *Poisons*, (which see.) *Didomi*, I give, is the Greek origin of the second syllable, the word, therefore, means I give against, and it has sometimes been employed to signify a remedy given for any disease, but chiefly such as was considered inveterate. In old writers we sometimes find it employed to signify a standing form of medicine, such as Opiates, Confections. See *Poisons*.

ANTIMONY (Latin, *antimonium*, from the Greek *anti*, against, and *monakous*, monks). So called, say some authorities, from its fatal effects on the monks,—where, and on what occasion, we are not informed. Antimony is a metal commonly found associated with sulphur; it forms the base of several medicinal preparations of great utility, although possessing dangerous properties. In old Pharmacopœias it appears under the various forms of *Crude Antimony*, which is the ore mixed with Sulphur; *Regulus*, the pure metal; *Argentine Flowers*, an oxide, the result of combustion of the metal; *Glass*, *Liver*, and *Crocus* of Antimony, which are all oxy-sulphurets, the result of heating and vitrification of the ore. There is also *Powder of Algaroth*, a protoxide (see *Algaroth*), and *Kermes Mineral*, which is the golden Sulphuret of Antimony, so called from its resemblance to an insect of that name, and its rich yellow colour.

The preparation of Antimony now chiefly used in medicine is the *Potassio-Tartrate*, commonly called *Tartar Emetic;* externally a counter-irritant, applied in the form of ointment; internally, a diaphoretic, in doses from 1-12th to 1-16th of a grain; an expectorant 1-16th of a grain; a contra-stimulant and emetic from 1 to 3 grains. This is the most certain in its operation of all the preparations of Antimony; hence its frequent employment in febrile and other diseases, especially those of the lungs and bronchial passages. Its most common form of administration is Antimonial Wine *(Vinum Antimonii Potassio-tartras)*, the dose of which, for adults, is from 20 to 30 minims; as an emetic for children, from ½ to 1 drachm may be given every quarter of an hour until it operates. It is very useful in Hooping and other Coughs, to promote expectoration and relieve the chest and trachea of phlegm; and in active inflammation of the lungs, &c. The effect of Antimony upon the pulse is generally very marked and rapid, and the prostration of strength which follows its administration, renders it a dangerous remedy in the hands of the unqualified practitioner. It is much too indiscriminately given; few considering, when they run to the druggist for a pennyworth of Antimonial Wine, that they carry home to their children a diluted poison, whose action, even if apparently beneficial at the time, may eventually prove highly prejudicial. If an emetic is required, Ipecacuhana Wine is as certain in its operation, and much safer. See *Emetics*.

The caution cannot be too constantly impressed upon the public, that all preparations of Antimony, except very carefully crystallized Tartar Emetic, *contain more or less Arsenic*, a metal originally combined with Antimony in its native state, and pertinaciously associated with it through all its modifications. The Tartarized Antimony of the shops is not always "carefully crystallized," hence the danger of its too indiscriminate use. In that sudden and often fatal disease in children called *Croup* (which see), Tartar Emetic is one of the most ready and effectual remedies. Should the attack be violent, 1-8th of a grain may be given every quarter of an hour. Preparative to the passage of an instrument into the urethra, or other constricted part, or the reduction of a dislocation, it is often administered with good effect, causing a relaxation of the muscles, and rendering the operation comparatively easy.

One of the mildest and safest forms of administration of Antimony is the Antimonial Powder *(Pulvis Antimonii Compositus)*, commonly sold as James's Powder, a patent medicine, from which it differs but little in its mode of preparation: dose, as an alterative, 1 to 3 grains; as a diaphoretic, 3 to 8 grains; in larger doses, an emetic and purgative.

Several preparations of Antimony combined with Sulphur are used as *Alteratives*, and *Antiscorbutics*, (which see.) The celebrated Plummer's Pill *(Pil. Hydrargyri Chloridi Comp.)* is one of these: this is commonly given in the secondary stages of *Syphilis*, which see.

For remedies for poisoning by Antimony, see *Poisons*.

ANTONII SANCTI IGNIS. The Latin for *St. Anthony's Fire*, so called from an old monkish legend which ascribed its miraculous cure to St. Anthony. This is an inflammatory affection brought on by several causes which are likely to excite inflammation,—such as exposure to cold, obstructed perspiration, suppressed evacuations, the application of acrid stimulants to the skin, &c. It comes on with the usual premonitory symptoms of fever, cold chills, and drowsiness, succeeded by heat and external redness, which, in the part immediately affected, ecomes for a time permanent; when it is he face, delirium sometimes ensues. When he inflammation is principally confined to he skin, and causes but little constitutional erangement, it is called *Erythema* (which ee); but when the system is affected, as bove described, it is *Erysipelas* (which see).

Anus (Latin). The orifice of the alimentary canal; of which it is the outlet. It is ept closed by the *Spincta Muscle* (which ee), which in health acts instinctively; but n certain diseases, such as paralysis, and he last stages of fever, it loses its power, nd the evacuations become involuntary. n this case but little can be done in the way of local applications; astringent lotions f Alum and Sulphate of Zinc may be of ome slight service, but the efforts must be mainly directed to the disease itself, from which the deficiency of power arises.

The chief of the unnatural or diseased conditions of the anus, are—

1st. *A. Imperforate*, in which there is a losure or obliteration of the terminal opening of the canal. It is sometimes the case with new-born children, and the medical attendant should always satisfy himself by actual inspection that it is not so; if it is, an artificial opening must be made, which only he ought to attempt. In some instances there is an external appearance resembling an anus, but it is covered by a membrane which is generally of a darker colour than the surrounding integuments, on account of the accumulation of fœces on the inner surface, which, pressing it downward, a roundish protuberance is formed, yielding to the pressure of the fingers, but returning when the pressure is withdrawn. Sometimes it is a fleshy adhesion which closes the intestine, and this offers greater resistance to the finger, and does not present the livid or blackened appearance before described. See *Fistulæ*, *Hæmorrhoids*.

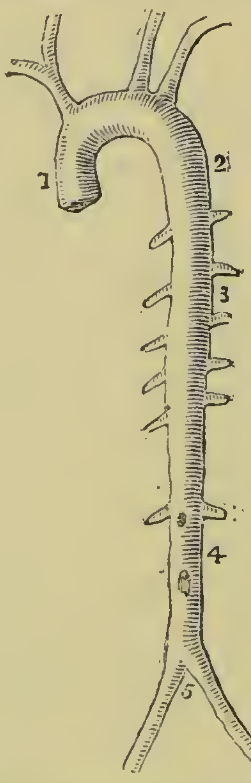
The only variety in this kind of malformation in which the surgeon can be of service, is that in which the alimentary canal is complete, with the exception of the external opening, which can be made by means of an instrument called a *Bistoury* (which see), passed into the rectum, and through the interposing membrane; then, by the daily introduction of the finger, or an oiled bougie, until the edges of the wound become healed, a permanent opening may be made. The case is sometimes rendered very doubtful and embarrassing, from there being no external appearance to denote where the anus ought to be; it is then a question whether the intestine is closed by a fleshy adhesion, or the coalescence of its sides, or whether a part of the gut be wanting, and the surgeon, if he operates, must do so very much at a venture. As, however, death must inevitably follow the permanent closure of the intestine, the effort to effect an opening should be made.

2nd. *Anus Artificial.* By this is understood an accidental opening in the sides of the abdomen, to which some part of the intestinal canal tends, and through which the fœces are wholely or partially discharged. This may be caused by the bursting of an abscess externally, a gunshot or other wound in the belly, ulceration of the bowel, or an opening purposely made with the view of saving life, or an accidental wounding of the gut in an operation for *Hernia* (which see). The remedies applied to this class of cases may be either simply palliative or remedial; the former are intended to obviate the uncleanliness produced by the involuntary discharge of the intestinal matter, and to relieve any bad symptoms which may arise. The first of these objects is effected by attaching to the opening a small machine of tin or silver, or a tube of elastic gum, conducting to a receptacle for the discharged fœces, placed in some convenient position; these, however, are troublesome contrivances, and rarely answer the intended purpose completely. Some have proposed a piece of sponge kept over the opening by a truss; but this is apt to produce cholic, costiveness, and an excoriated state of the skin. If the opening is disposed to contract too much, a tent, or skein of silk, may be introduced into the aperture; this should be changed frequently, for the sake of cleanliness; some have preferred a ring of ivory for this purpose. Sometimes the gut protrudes, and then its reduction may be effected by gentle pressure, unless the protruded part should be thickened and inflamed when, as in the case with strangulated hernia, it is generally considered irreducible, and excision must be had recourse to. Compression with a baudage moistened, with some cooling lotion has, however, been successfully adopted, care having been taken to leave open a passage for the fœces. No directions can be given here for any attempt to effect a radical cure of this disease; only the skilful surgeon can judge of the necessity and propriety of such an attempt, and of the proper mode of operation.

Anus Prolapsus. This is the protrusion, in a greater or less degree, of the rectum at the anus, caused by the relaxation of the internal membrane, or from a displacement of a portion of the bowel; this form of disease is most common in children and old people; it may be small, resembling a mere ring; or large, hanging far down in an oblong globular form. The tumour may, generally, be reduced, although, sometimes, with considerable difficulty. Its exciting *causes* may be traced to every circumstance which tend to relax, or weaken, the parts which retain the rectum in its inner membrane in the proper situation. Irritation and pressure on the bowel itself, diseases in the adjacent parts affecting the rectum by sympathy; hence, long continued crying, violent coughing, straining to void hard dry fœces, obstinate diarrhœa, dysentery, frequent use of aloetic purgatives or emollient clysters, hæmorrhoids, difficulty in making water, efforts at parturition, stone in the bladder, and paralysis of the muscles of the anus. Three objects are to be kept in view in the mode of *treatment*:—1st. the prompt reduction of the prolapsed part, which can, generally, be effected by the patient assuming a recumbent position, and pressing it back gently, if it does not go of itself, with his fingers; should it be obstinate, on account of swelling and inflammation, such efforts must not be long persevered in, but recourse had to leeches, fomentations, or cold lotions, with the exhibition of a dose of Castor Oil, and an emollient enema to empty the larger intestines. 2nd. The retention of the reduced bowel; quietude and a recumbent position are necessary to effect this object. If there be a tendency to relapse, apply to the fundament a piece of sponge or compresses of lint, supported by a T bandage. (See *Bandages*). Adults may wear an instrument which may be obtained of any chemist or surgical instrument maker. 3rd. The removal and avoidance of causes known to have a tendency to bring on this complaint; everything disposing to costiveness and diarrhœa, or to straining of any kind, should be avoided. Irritability of the rectum may be lessened by anodyne lotions and small doses of opium; acidity in the bowels causing flatulency, corrected by *Anti-acids* (which see). Infants liable to *Prolapsus Ani* should use a high close stool, with their legs freely depending. It should be observed that no art can rectify the displacement of the higher part of the bowel, especially of the *Colon* or *Cœcum* (which see); but nature has many processes by which she effects a remedy for internal as well as external injuries, thus considerable portions of the intestinal canal, which have become inverted, have been known to separate and been voided, with little more than a temporary inconvenience to the patient. See *Bowels*, *Intestines*.

Itching of the Anus is, generally, indicativ of *Worms*, which see.

Aorta (Greek, *aer* air, and *tereo* to keep) The great channel of arterial blood proceeding directly from the heart: so named, because it was formerly supposed to contai only air. It is distinguished in surgery a *ascending* and *descending;* the former bein



beyond the arch represented in the cut (1), and the latter the long trunk (2); this trunk or channel is again divided into the thoracic portion (3) because it traverses the chest, and the abdominal portion (4) as it passes through the abdomen; below this it divides into two branches, for a description of which, as they bear other names, we must refer to *Arteries*. From the upper arch of the aorta (5) also spring several large branches, and smaller ones are thrown out on every side, all down the course of this great channel of vitality; in it all the secondary arteries have their course, except one, the *Pulmonary* (which see); it opens into the heart, just opposite the junction of the fourth rib with the breast-bone, and the blood pumped into it by the alternate compression and dilation of that organ, is prevented from returning by three semicircular valves. See *Heart*.

The most common diseases of the aorta are *neurism* (which see), and *Aortilis*, or in- immation of the aorta; for treatment of hich see *Inflammation.*

Apo (Greek, from or of). Its compounds far as they relate to the subjects here eated of, are 1. *Apo neurosis* (Greek *uron*, a nerve) a fibrous or tendinous ex- ansion in the thigh, it was erroneously upposed by the ancients to be that of a rve, hence the name; we call it *Fascia ta.* See *Thigh.* 2. *Apo physis* (Greek *hyo*, to produce), a process and a part of bone. See *Epiphysis.* 3. *Apo plexia* reek *plexia*, to strike). See *Apoplexy.* *Apo sepedine* (Greek *sepedin*, putre- ction), a substance formed from the utrefaction of animal matter, sometimes illed *Caseus oxide*, which see. 5. *Apo ema* (Greek *istemi*, to stand), an *abscess*, hich see. 6. *A-potheca* (Greek, a shop). ee Apothecary. 7. *Apo zem* (Greek *zeo* to oil) a *Decoction*, which see.

Apocynum Cannabinum. The plant, of hich this is the botanical name, belongs to e natural order *Apocynaceæ.* In America is called Indian Hemp; but this name roperly belongs to another species. See *annabina Indica.* The root of the above emetic, cathartic, and sometimes acts as diuretic, diaphoretic, and expectorant. ose, of the powdered root 15 to 20 grains; ecoction 1 to 2 ounces three times a day— seful in dropsies; extract, 3 or 4 grains, ree times a day.

Apoplexy (Greek as above.)—This is de- rivation of life or motion by a sudden stroke, r blow: it is one of the most awful and ppalling modes of sudden death; in an in- tant a healthful and vigorous man is smitten own, one who has exhibited no signs of ecay or disease, who has perhaps received no remonitory warning, lies before us motion- ss and stark.

Apoplexy may be either *cerebral*, pro- eeding from congestion or rupture of the rain, or *pulmonary*, proceeding from emorrhage into the parenchyma of the *ungs* (which see.) The first is its more ommon form, and this may be spoken of nder four heads, 1st., when it is sudden nd violent at once; 2nd, when it is omparatively slight at the commencement, nd progressively increases in severity; rd, when it commences in apoplexy and erminates in paralysis; 4th, when it com- ences in the latter, and terminates in the ormer.

The *causes* of apoplexy are either pre- isposing or exciting; among the first may e named—1st, *Sex:* men are more liable to it han women, because they are more subject to its exciting causes of which we shall presently speak—2nd, *Age:* it is very rare in childhood, rare also in youth, most common between the ages of 40 and 70, rare much beyond the latter age—3rd, *Bodily Conformation:* the man of sanguine and plethoric temperament, with large head, short neck, and full chest, is most liable to its attack, although one of the opposite state and condition of system is sometimes smitten down by it.—4th, *Mode of Life:* persons of sedentary habits, who live luxuriously, are its frequent victims.—5th, *Suppression of Evacuations or Eruptions*, as the piles, perspiration, healing of a seton, or a wound. 6th, *Mental Anxiety:* such as a long continuance of harrassing fears, business perplexities, grief, or any violent emotion, or passions. All these are predisposing causes of apoplexy to which it has been said that the studious are more liable than others; but this is an error, as the history of lawyers, judges, and philosophers ancient and modern is sufficient to show; persons of advanced age, who take rich and stimulating diet in more than sufficient quantity, and whose intellectual faculties are exercised but little, are those most frequently carried off by this embodiment of the Greek idea of the "skeleton at a feast." The most powerful *exciting causes* of apoplexy, then, are intemperance, whether in eating or drinking, as well as violent exertions of the mind and body; whatever, in short, tends to determine the blood with an undue impetus to the brain or impedes its return from it, is an invitation to this dreadful destroyer to step in and arrest the vital current in its flow, as the breath of frost stays the water of the river.

Treatment. This, of course, must vary considerably in accordance with the pathological condition of the brain of the person attacked, and with other circumstances which only those accustomed to the treatment of disease can judge of. The *immediate* measures to be adopted when a fit of apoplexy comes on (which may be known by the patient falling down in a state of insensibility, or stupor, out of which it is impossible to rouse him by any of the ordinary means; the face is generally flushed, the breathing difficult and stertorous; the upper lip-margin is projected at each expiration; the veins of the head and temples protrude as though overfilled, the skin is covered with perspiration, and the eyes are fixed and blood-shot: sometimes, however, the face is pale, with a look of misery and dejection, and the pulse instead of being full and hard, is weak, and intermitting;

in the former case, as soon as the patient has been placed in a sitting position with the legs depending, everything about his neck removed, and the air freely admitted, a vein should be opened in the neck or arm, and the blood allowed to flow until the pulse is greatly reduced; a pallor in the face, and a generally relaxed state of the muscles, shows that fainting is about to ensue: in the latter case, it is necessary also to relieve the neck of all pressure, to place the body upright, and admit air—but beyond this the treatment must be different; cold water should be dashed in the face, strong Spirits of Ammonia applied to the nostrils, and the feet put into a warm bath with a little Mustard, and every means taken to arouse the patient from his state of lethargy: as soon as this is so far effected that he can swallow, give ½ drachm of Aromatic Spirits of Ammonia in 1½ ounces of Camphor Mixture, as a stimulant draught, but it is only when the pulse is feeble and fluttering that the stimulant may be administered; this is the exceptional case in apoplexy; most commonly the symptoms are those first described, and if relieved at all it must be by free bleeding and other measures of depletion. Purgatives must be got down as soon as possible, 10 grains of Calomel placed on the tongue, and washed down with a black draught, or two or three drops of Croton Oil may be rubbed on the back of the tongue, and a lavement composed of two table spoonfuls of Common Salt, with a little Oil or Butter, and a pint of Warm Water; or a tablespoonful of Soft Soap mixed with the same quantity of water; or an ounce of Spirits of Turpentine, rubbed down with the yolk of an egg, and a pint of thin Gruel: one of these should be repeated every two hours until some decided effect is produced. Other means of relieving the system may be taken should these fail, such as blisters behind the ears, to the nape of the neck or calves of the legs; should the head be very hot, let it be shaved, and a cold lotion be applied to it, Water and Vinegar, or Acid Water, will do best. Should the attack be soon after a full meal, administer an emetic, a scruple of Sulphate of Zinc with a grain or two of Tartar Emetic: something like this should always be given when apoplexy arises from the effects of opium or spirits. Cupping on the temples, or opening of the temporal artery, is sometimes resorted to in obstinate cases, and in pulmonary apoplexy: after the most violent symptoms are relieved by copious bleeding, nauseating doses of Tartar Emetic frequently repeated, or Digitalis, to reduce the action of the heart, have been found useful. In all cases, after the crisi of the disease is over, and when the patien has become convalescent, it behoves hir to be very careful, as a slight indiscretio may bring on a fresh attack.

We have said, that Apoplexy comes without warning, but this is not strictly true However sudden the attack itself may be there are certain premonitory symptom which no prudent man will disregard among these may be named, a sense o fulness in the veins of the head, and a feeling of pressure in the head itself, witl occasional darting pains, giddiness, vertigo partial loss of memory, and the powers o vision, and of speech; numbness of th extremities, drowsiness, and a dread of falling down; irregularity in the action of th bowels, and involuntary passage of urine These all indicate that some internal mischief is going on, and if their warning i attended to, the threatened attack may perhaps, be avoided. Persons, whose ful habit of body and modes of life, predispos them to this disease, should, when suc warnings reach them, live sparingly, avoi stimulants, especially fermented, and spirituous liquors, take regular and moderat exercise, sleep on a firm pillow with th head elevated, and nothing round the nec to impede the act of breathing. Keep th bowels regulated by an occasional dose c Colocynth and Calomel pills, and saline purgatives. Those of a spare habit should tak light, although nourishing diet, a little bee or wine, if they have been accustomed to it and it does not affect the head; spirituou liquors and hot spices should be avoide and great bodily fatigue or nervous excitement of any kind.

Apothecary (Greek *apothekæ*, a sho or store-room). This term appears to com from the above root, although we no apply it chiefly to one who compounds c prescribes medicines, and not to the vend or shopkeeper. The apothecary of our da is the regular "Family Doctor," wh having obtained a licence to practice fro a chartered incorporation, puts after h name the letters L.A.C., meaning Licentia of the Apothecaries Company, of Londo incorporated by James I, in 1606; th association was then united with the Grocer Company, but in 1617 it was formed into separate company, with the exclusive rig of dealing in and compounding drugs. the close of the 17th century, the membe of this association began to prescribe as we as dispense medicines; they soon after b came the common medical attendants of th sick, and performed the functions both

e physicians and surgeons of our day.
; their calling became gradually elevated
to a profession, there arose a new class to
pply their place, those called chemists and
uggists, who now deal in drugs, and com-
und medicines, as the apothecaries used to
; of these we shall have to speak by-and-
e. Several Acts of Parliament for re-
icting or extending the power of the
othecaries Company have been passed at
fferent times; the last was in 1815, and
is, as every medical practioner is, to a
rtain extent, an apothecary, gives the
mpany a large amount of control over the
ofession throughout the kingdom. No
rson is legally qualified to practice unless
shall have served an apprenticeship with
licentiate of this company, passed before
board of examiners, and paid certain fees
hich they are empowered to demand for a
ense. The French *apothecaire*, and the
tin *apotheca*, come very close to the
reek original in sound and signification :
ere is no Apothecaries' Company across the
annel, and the apothecary there is more
a medicine vendor and compounder than
is with us.

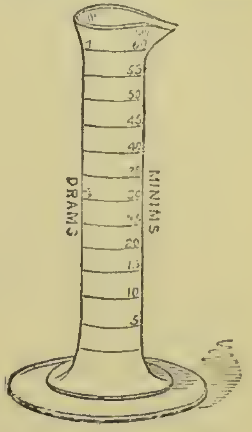
We may observe here that *apothesia* in
tany signifies a repository, and is applied
the cases in which the organs of repro-
ction of many of the *algæ*, or sea-weeds
e contained.

Apothecaries' Weights and Measures,
e those which are constantly used in the
mpounding and dispensing of medicines in
is country; as a knowledge of them is
sential to those who would attempt the
mestic treatment of diseases, we give
em *in extenso*.

Weights. One pound contains 12 ounces,
5760 grains, one ounce 8 drachms, or 480
ains; one drachm 3 scruples, or 60 grains;
e scruple 20 grains.

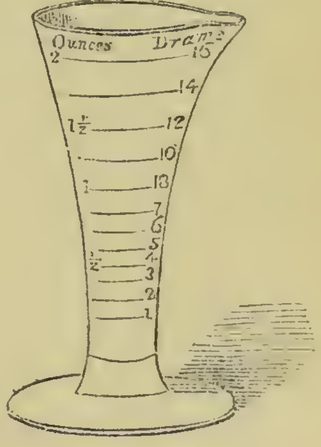
Measures. One gallon contains 8 pints, or
,000 grains of water; one pint 20 ounces,
8,750 grains; one ounce 8 drachms, or 437
grains; one drachm 60 minims, 54·7 grains.

Symbols and Characters. lb. represents a
und; ℥ an ounce; ʒ a drachm; ℈ a
ruple; gr. a grain; *C.* for *congius*, a gal-
n; *O.* for *Octavious*, a pint: the prefix fl
fore ʒ or ℥, means a fluid drachm or
nce; ♏, a fluid minim; gtt. for *gutte*, a
op. The letters ss put after either of
ese characters signifies a half; thus, ℥ss
half an ounce. It should be borne in
ind that minim and drop are not the
me quantities, the former containing
arly half as much more as the latter, thus
minims of Tincture of Opium are equal to
drops; formerly it was customary to prescribe all medicines by drops, as let fall from the mouth of a bottle; but the quantity in a certain number of these differed so considerably according to the density of the fluid, or the vessel it was dropped from, that an alteration in the plan was found necessary, and that of admeasurement was adopted: we give below a cut of a minim measure,



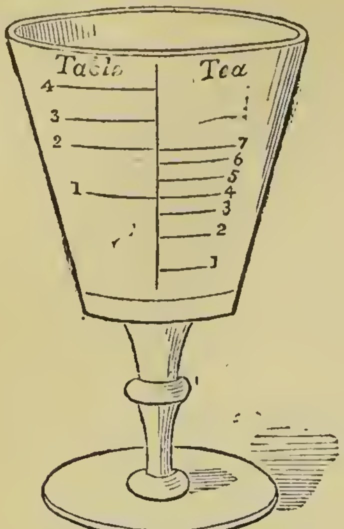
Minim measure.

and also of one used for larger quantities; these may be purchased of any druggist, at a low price, they are made of glass, some are large enough to contain a pint.



2 ounce measure.

We give also a cut of a graduated medicine glass which is a useful article in the nursery or sick chamber; it should be explained that a table-spoonful is considered to be half an ounce, a tea-spoonful 1 drachm, a dessert-spoonful is 2½ drachms, a wine-glassful is 2 ounces; as spoons and glasses vary much in size it is best to use a measure like this in giving medicines.



Graduated Medicine Glass.

APPETITE (Latin *Appetitus*), an instinctive desire to gratify any natural wants of the body, generally applied to the inclination for food, which in health is felt at certain regular periods; it is a warning to furnish the alimentary organs and tissues with fresh nutriment, and supply the place of that which has been absorbed, or otherwise conveyed away. God has ordained that we shall have pleasure in the gratification of this sense; he has given it as a blessing, yet it is too often turned into a curse by excessive indulgence. There is no greater symptom of a good state of health than a regular appetite, and its moderate and judicious indulgence is one of the best means of preserving this great blessing. Most commonly, when disease comes on, the appetite flags, and this is often a sign that Nature herself requires rest for those organs by which the conversion of food into nutriment for the body takes place. This is, perhaps, not sufficiently understood, or sick people would not be pressed by well-intentioned but injudicious friends to eat when they had much rather, and much better, leave it alone. See *Diet*, *Food*.

Loss of Appetite, may be considered as symptomatic of many diseases: Fever, Congestion of the Liver, Dyspepsia, Constipation. It, generally, attends all these and many more of the ailments of the flesh, as it does often an uncontrolled and anxious mind. Sedentary pursuits and want of proper exercise, often result in loss of appetite, arising from derangement of the digestive organs, so does breathing impure air, excessive drinking, or anything by which the tone of the stomach becomes injured and the general strength impaired. The proper remedy for loss of appetite, of course, must depend upon the cause of it; bitter medicines, such as Cinchona in its various forms; Gentian, Quassia, Calumba, or Camomiles, are those which usually lead to its restoration; the several preparations of Iron are also good, and the mineral acids of course, in a greatly diluted form; fresh air and moderate exercise will, also, assist but all will be in vain while the *cause* remains untouched.

A Depraved Appetite, consisting in the longing for, or devouring substances not intended for food, not unfrequently attends pregnancy, and the chlorotic diseases of young females (see *Chlorosis*). This is sometimes looked upon as a sign of mental aberration; but it is not so; a person may eat chalk, ashes, slate-pencils, cinders, earth and other substances, injurious or otherwise and yet be in a perfectly sound state of mind. The strange inclination is no doubt caused by disordered functions perverting the taste; intense longing after some unattainable object will sometimes have this effect: so the poor Negro, far away from his native woods and wilds, eats dirt,—and this is a form of diseased or depraved appetite.

Fanciful and Variable Appetites have also their origin in some functional disturbance; the former is very common in *Pregnancy*, the latter, where there are Intestinal *Worms* (both of which see). Sometimes a child will at one time eat voraciously and at another scarcely at all; if, with this symptom there should be itching of the anus, pallor, disturbed rest, and gnawing pains in the bowels, resort to *Anthelmintic* which see.

AQUA (Latin for Water, plural *Aquæ*) hence, *A. ex Laca*, Lake Water; *A. e Nive*, Snow Water; *A. ex Putride*, Marsh Water; *A. ex Putio*, Well Water; *A. Fluvialis*, River Water; *A. Fontana*, Spring Water; *A. Marina*, Sea Water; *A. Pluvialis*, Rain Water. These, except the *Chalybeate* and *Sulphureous Waters* (which see) are all the natural kinds usually mentioned in prescriptions, and applied to medical purposes. Of the composition of the element itself, of its uses, and the impurities which enter into it we shall speak more fully under the head *Water*. At present we have to do more especially with the artificial preparations to which the prefix *Aqua* is generally attached, such as *Aqua Distillata*, Distilled Water, that which has undergone the process of distilling, and is fit for

. purposes for which purity is essential. ie lime and other impregnations which cur in most natural waters render them ifit vehicles for the exhibition of many lts, and other chemical preparations; erefore, that which has passed through e still is often used in compounding medi- nes. Distilled Waters is, also, a common me for those impregnated with the essen- l oil of vegetables, such as Cinnamon, ill, Mint, &c., these all possess carmina- ve or other properties, and are spoken of ider the heads of the plants from whence ey derive them. There are several others iown as medicinal, whose names occur in e Pharmacopœias, such as *Aqua-fortis*, lite- lly, Strong-water, one of the most corrosive liquids (see *Nitric Acid*); *A. Calcis*, ime Water (see *Lime*); *A. Phagadenica*, lotion for ulcers formed by the decomposi- on of Corrosive Sublimate in Lime Water; . *Picis Liquide*, Tar Water; *A. Regia*, oyal Water, so called, perhaps, because it is the power of dissolving even gold; this a mixture of Nitric and Muriatic Acid ee *Acids*); *Aqua Toffana*, a deadly poison epared by an infamous woman in Italy, ie composition of which has never been ecisely known (see *Poisons*); *Aqua Tosti arnis*, Toast Water, a very useful drink in ckness.

AQUEDUCT (Latin *Aquæ ductus*, a Water ourse). This term is applied to several icts or passages of the humours of the ody; thus, there is the aqueduct of Fallo- ius, the canal by which the *portio dura* winds irough the petrous portion of the temporal one;—of *Sylvius*, the canal which extends ackwards under the *tubercula quadrige- ina* into the fourth ventricle (see *Brains*) f *the Cochlear*, is a foramen of the temporal ones for the entrance and exit of the blood essels of the ear; of the *Vestibulum* (see *ar*).

AQUEOUS, Watery; hence, *Aqueous hu- our*, the fluid which fills the anterior part f the *Eye* (which see); a vapour, the steam hich arises from heated water. See *Baths, team*.

ARGEMONE MEXICANA (Yellow Mexican histle). See *Prickly Poppy*.

ARGENTUM (Latin for silver). Many pre- arations of this well-known metal are nployed medicinally. The metal itself, in ne powder, has been rubbed into the ongue, to be absorbed into the system as a emedy in *Syphilis* (which see). The Oxide, yanide, Iodide, and Nitrate of Silver, are ood tonics and antispasmodics; they are iven in *Epilepsy*, *Chorea*, *Passive Hæ- orrhages*, and *Gastrodynia* (all of which see). The *Nitrate of Silver*, commonly called *Lunar Caustic*, is much used, both solid and in solution, in surgical cases, as a stimulant, vesicant, and escharotic; it is supposed to arrest Erysipelas, and other inflammations of the skin, a ring drawn by a pencil of this substance, moistened with a little water, round the seat of the inflammation, confining it within those circumscribed limits. The *Oxide of Silver* has been much recommended as a sedative and tonic, and used as a remedy for *Dyspepsia*, *Gastrodynia*, *Pyrosis*, *&c.* (all of which see); also *Uterine Hæmorrhage*, *Hæmotopsis*, and *Chronic Diarrhœa*, especially of children: dose, from ¼ to 1-3rd or ½ a grain; if necessary. It may be given in stomach affections two or three times a day; a small dose of Opium may be combined with it in obstinate relaxation of the bowels: if there is Hæmorrhage, the dose may be from ½ to 1 grain, or even more.

Cyanide of Silver. Chiefly sedative and tonic: dose, from 1-10th to 1-12th of a grain.

Iodide of Silver. Same as above, and not so likely to discolour the skin: dose ½ to 1 grain.

Chloride of Silver, for Epilepsy; dose 3 grains three or four times a-day.

Ammonio-Chloride of Silver. Seldom used, from one-fourteenth of a grain.

Ointments and lotions of all these are occasionally employed, but it is the Nitrate that is most used for external application; the strength of the ointment varies from 1 grain to 1 drachm in an ounce, and of the lotion from ¼ of a grain to 8 scruples in an ounce. Distilled water must always be used for it, or immediate decomposition will ensue even with that it will do so after a short time if the rays of light are admitted to the bottle which contains it; if the glass is not of a dark colour, some paper should be wrapped around the bottle. For poisoning by nitrate, or other preparation of silver, see *Poisons*.

ARMORACIA. See *Horse-radish*.

ARNICA. Commonly called Leopard's-bane. Botanical name, *Arnica Montana;* natural order, *Asteraceæ*. Many virtues have been ascribed to this plant, more, perhaps, than it really possesses; its principal appears to be that of a nervous stimulant. On the stomach and bowels it acts as an irritant; it is said also to be diuretic, diaphoretic, and emmenagogue. In Germany it is a popular remedy for the ill effects of severe falls, bruises, &c. on the nerves and brain; it is also given in *amaurosis*, *paralysis*, and other *nervous* affections (which see); also *hydrocephalus*, and *typhus fever*, in the latter stages of which it has been recommended. It is used externally in lotions for bruises and affections of the brain. Dose of the powdered flowers 5 to 15 grains; powdered root 10 to 30 grains; infusion, half an ounce; extract, 1 to 10 grains; tincture, 30 drops; essential oil, 1 to 2 drops.

ARSENIC (Latin *Arsenicum*). This is the metallic base of several salts and oxides and preparations therefrom, used medicinally, all of which are highly poisonous, and should therefore be very cautiously employed or administered. The common White Arsenic of commerce is properly Arsenious Acid (*Acidum Arseniosum*), see *Acids*. In this form Arsenic is not often prescribed by English surgeons: the solution with potash, as in Fowler's solution (*Liquor Potassæ Arsenitis*) being preferred: it is chiefly given in obstinate chronic diseases of the skin, and in intermittent fevers, and other periodic diseases: the doses varying from 5 to 15 minims: it has been said that for the first-named class of disease it is never required in larger doses than 5 minims, given three times a day on a full stomach, the dose to be reduced as soon as the system becomes unduly affected by it; which may be known by itching and redness of the eyelids, swelling of the cheeks and eyes, soreness of the mouth, and a feeling of giddiness; or it may be that there are griping pains in the stomach, nausea, if not vomiting, and head-ache; in the latter case it should be discontinued altogether, as it is evidently an unsuitable remedy for the individual. It should never be used internally for persons of plethoric habit, or who have any symptoms of *phthisis;* but to such it may be applied in the form of ointment, so that it may act by absorption: one part of the White Oxide rubbed down with seven parts of Spermacoti Ointment is a good formula.

Orpiment, or yellow arsenic, called in old medical works *auri pigmentum*, golden pigment, is a sesqui-sulphuret of arsenic; it is principally used as a pigment, and is the colouring principal of the paint called "King's yellow." There is also a Red Arsenic, called *Realgar;* this is a proto-sulphuret of the metal, it is either *native* dug out of the earth in China, or *factitious* produced by heating orpiment in a subliming vessel.

The symptoms of *Poisoning by Arsenic* are as follow: first comes on faintness and nausea, with a burning pain in the stomach which continues to increase: then follows diarrhœa, cramps in the calves of the legs, incessant vomiting, the matter discharged being brown and turbid, containing mucus and sometimes blood; the retching is violent, there is great heat in the throat, and intense thirst; the pulse becomes faint and irregular, the skin if not extremely hot, cold and clammy, the respiration laboured and painful, until death ensues, preceded sometimes by coma, or by paralysis, tetanus, convulsions, and spasms of the extremities.

Remedies to be of any use must be given *immediately*, Mustard and Water, or other emetics, the Stomach Pump, Milk, Lime-water, and White of Egg, as much as can be got down; but little confidence, however, can be placed in antidotes; the poison is of so corrosive a nature, that if suffered to remain in the stomach, it will be pretty sure to do irreparable mischief; therefore all the efforts should be directed to getting it out as soon as possible; excite vomiting by all possible means, and throw in diluents. If the treatment should be successful, and the patient appears to be recovering, administer Hydrated Sesquioxide of Iron if it can be procured; give a spoonful largely diluted with water, every hour or so. See *Iron*.

The facility with which Arsenic could be procured having led to its frequent use as a poison, an act of Parliament was passed a year or two since "To confine and regulate the sale of Poisons:" as it is desirable that ur readers should be fully informed on this ead, we give an abstract of that part of it which relates to this metal :—

1. Every person selling Arsenic shall before ts delivery enter in a book, to be kept for hat purpose, a statement of the quantity of rsenic thus sold, and the purpose for which t was stated to be required. Also the date nd place of sale, and the name, place of bode, and condition or occupation of the urchaser. Such entry to be signed by the urchaser; or if he professes not to be able o write, the seller to affix the words "cannot write."

2. No person to sell Arsenic to another erson unknown to him, unless the sale is made in the presence of a third party, who s known to the seller, and who also knows he purchaser. Such third party to sign his name, together with his place of abode. No person to sell Arsenic to any one under full age.

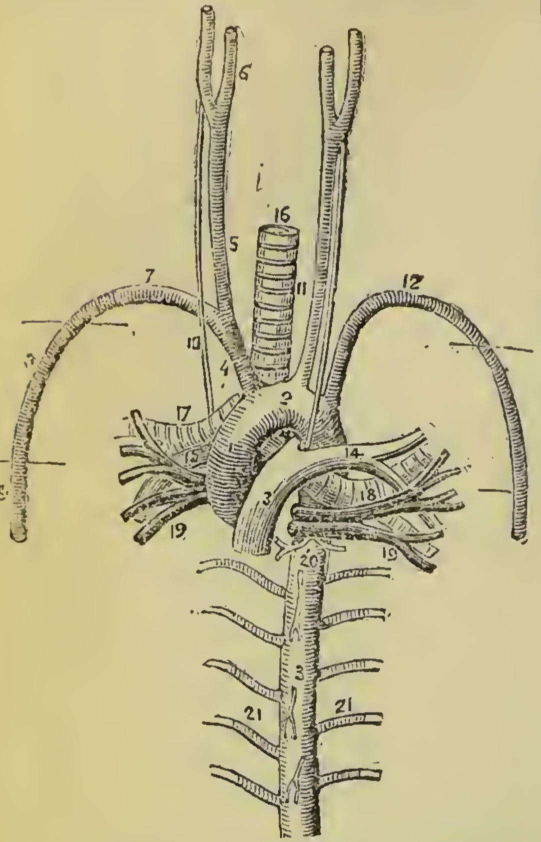
3. Arsenic, when thus sold, to be mixed with Soot or Indigo, in the proportion of one ounce of Soot, or half an ounce of Indigo, at least, to one pound of Arsenic; provided that when it is stated that the Arsenic is wanted for use in agriculture, for which such admixture would render it unfit, it may be sold unmixed, in quantities of not less than ten pounds at one time.

4. Penalty for not complying with the above, upon a summary conviction before two justices of the peace, in England, Ireland, or before two justices of the peace, or a sheriff of Scotland, £20.

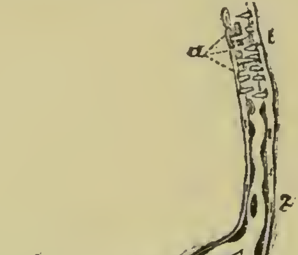
5. This Act not to extend to Arsenic when it forms part of a prescription written by a legally qualified medical practitioner, or in wholesale or retail dealings, upon an order in writing in the regular course of trade.

ARTERIES (Greek *aer*, and *tereo*, to keep), vessels which convey the blood from the heart; formerly supposed, from their being found empty after death to contain only air, hence the above names. The arterial system of the human frame, is that which performs one of the most important functions on which vitality depends; proceeding directly from the heart, and ramifying in every direction, through all the various tissues of the body, it conveys the blood, after it has received a supply of oxygen from the lungs, and been passed into the great organ with which the arteries are connected, wheresoever it is required for the purposes of life. These arteries are membraneous cylindrical tubes, composed of three coats, viz., the *external*, which is firm and strong, formed of tissues which take a longitudinal or oblique direction; the *middle* or *contractile* coat, which is thick and *laminated*, that is, composed of *laminæ*, scales or plates arranged in layers; and the *internal* coat which is the thinnest of the three, and is easily broken in a transverse direction. Much might be said about the peculiarities of these several coats, but the above is perhaps sufficient for our purpose; we may just give a summary view of their constituent tissues in the words of the anatomist Wilson.—"In their order of succession from without, it will be seen that the external coat consists of *areolar*, (which see), and elastic tissues; the middle coat of smooth muscular fibre, areolar and elastic tissue, and the internal coat of elastic tissue and *epiphelium*," (which see). From this we learn that the arteries are so constructed as to be capable of considerable extension, and likewise of bearing a great amount of strain and pressure to which they are occasionally subjected, and which yet results sometimes in a rupture. See *Aneurism*.

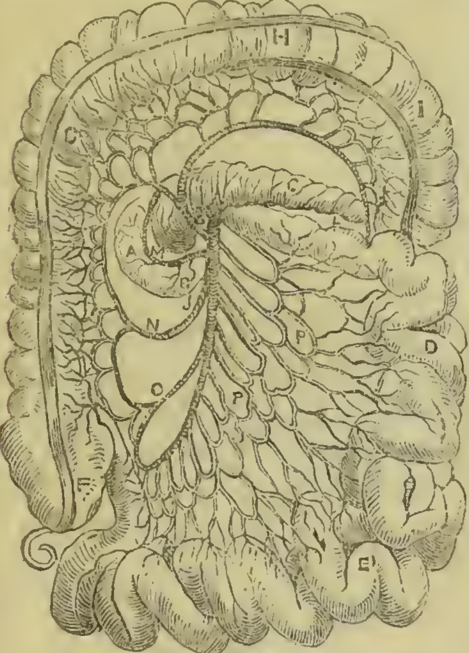
The whole of the arteries of what is called the *systemic* circulation, proceed from a single trunk termed the *aorta*, (which see); this main trunk or channel proceeds from the left ventricle of the heart, and contains the pure arterial blood, known by its bright red colour, and issuing, when it makes its escape at any accidental opening, in jets, in accordance with the pulsations. From these the smaller arteries are given off as branches, dividing and subdividing to their ultimate ramifications, constituting the great arterial tree, of some of the principal branches of which, we here present our readers with, a cut, which represents the large vessels at the root of the heart and lungs. It is necessary here to enter into a somewhat minute explanation of the figured points of the diagram. (*See over*). 1 is the ascending *aorta*; 2 the transverse portion of the arch of the same; 3, its thoracic portion, passing through the chest; 4, the *arteria innominata* springing out of the arch, and divided into the common *carotid;* 5, which again divides at 6, into the external and internal carotid, and 7 the right *subclavian* artery, which passes into the *axiliary* artery, 8, whose extent is indicated by the dotted lines; this again runs into the *brachial* artery, which forms the channel of supply to the right arm. The two lines 10 are a pair of nerves called the right and left *pneumogristric*, (see *nerves*); 11 is the left common *carotid*, and 12 the left *subclavian*, becoming axiliary and brachial in its course, like its fellow on the opposite side; all these belong to the greater *systemic circulation*, as do also 21, *intercostal* arteries, and the branches from the front of the aorta above and below No. 3, which are *pericardine* and *œsophagial*, pertaining to the *pericardium* and the *œsophagus*, (which see,) and abdomen. We now go back on the diagram to No. 3, the trunk of the *pulmonary* artery, which emanating from the right ventricle of the heart conveys the impure blood, returned there by the veins to the lungs for aeration. This is the main channel of the *lesser* or *pulmonary circulation*, it is connected with the concavity of the arch of the aorta by a fibrous cord, called the *ductus arteriosus ;* 14 is the left pulmonary artery, and 15 the right; 16 the *trachea*, or wind-pipe, the passage which communicates with the lungs, will serve to show the relative positions of these arteries; 17 and 18 are the right and left *bronchus*, and 19 are the *pulmonary veins* (which see); the rest of the numbers indicate the roots of the lungs, (which see).



The arteries do not, as was at one time supposed, run immediately into the veins, but are connected with them by what are called the *capillaries* (which see), a hair-like network of vessels so minute that it requires a microscope to make them out; these are, it is said, about 1-3000th of an inch in diameter, and they are distributed through every part of the body so thickly as to render it impossible to pass a small needle into the flesh without wounding several of them; hence the flow of blood from a prick; it is through this medium that all the phenomena of nutrition and secretion are performed; they are all small alike, and are joined on the one hand with the terminal ramifications of the arteries, and on the other with the minute radicles of the *Veins*, which see.



The capillary vessels have but one coat, which is transparent and fibreless; as they approach the arteries and veins this coat becomes thicker, and, in accordance with the substance thereof, they are distinguished as *fine* or *coarse ;* the latter gradually augmenting in size and complexity of structure become what are called *transitional vessels.* The following cut of a minute artery from the brain will serve to shew its transition into capillary vessels. 1. Minute artery. 2. Transitional capillary. 3. Coarse capillary, The thick coat being represented by the double lines of contour. 4. Fine capillary. the black marks indicate the position of certain nuclei dispersed over the inner surfaces of capillaries, transitional vessels, arteries and veins, constituting in the two latter the *epithitial* layer of the inner coat (see *epithitium*). The capillaries are most abundant in the lungs, liver, kidneys, and other secreting glands, also in the skin, and mucous membrane; and they are smallest and least abundant in the muscles, nerves, organs of sense, and those tissues where nutrition only is to be accomplished; they



are large in the bones, but not numerous, interweaving, as in many parts they do, into a minute network called *a Plexus* (which see). The extreme beauty of arterial arrangement will be best exhibited by a diagram showing the course, and distribution of the Superior Mesenteric Artery. A, is the descending portion of the *Duodenum;* B, is a transverse section of the same; C, the *Pancreas;* D, *Jejunum;* E, *Ilium;* F, *Cæcum*, and *Appendix Vermiformis;* G, *Ascending Colon;* H, *Transverse Colon;* I, *Descending Colon;* J, *Superior Mesenteric Artery;* K, *Colica Media;* L, the branch which inosculates (or joins by little mouths) with the *Colica Sinistra;* M, *Inferior Pancreatic Duodenum;* N, *Colica Dextra;* O, *Ilio Colica;* P, *Vasa Intestini Tenous.* Even the non-professional reader will see at a glance how admirable is the arrangement of the various tissues and organs, around which the arteries wind and ramify, communicating with and supporting each other, and conveying the vital fluid in every direction: truly we are fearfully and wonderfully made.

A particular description of all the several arteries could scarcely be looked for in a work like the present. It has already been seen that they are very numerous, although we have alluded to but few of them comparatively; some of them lie deep amid the internal viscera; others, as the *femoral*, passing down the thigh, the *temporal*, which traverses the forehead, the *carotid*, in the neck, and the *bronchial*, and other arteries of the arm, which are most likely to be wounded in the act of venesection, come very near to the surface, in some cases protected from injury only by the loose ariolo-fibrous investment which separates all arteries from the surrounding tissues and is called a *sheath*, and the skin: in such positions, it is that the medical practitioner applies to them for information respecting the action of the heart, that great index of the state of the system, whose every beat, or act of forcing out the blood, they record by a distinct *Pulsation* (which see).

Respecting the terms used in connection with this branch of medical science, we may, putting aside the names by which each artery and its branches or subdivisions are distinguished, just explain that *Arteritis* means inflammation of an artery or arteries;—*Arteriotomy*, the opening of an artery, generally the temporal, as in *Apoplexy* (which see). In this operation, when the vessel lies near the surface, it can be punctured at once with the lancet; but sometimes it lies deep among the muscles, and then it is necessary, in the first place, to make an incision in the skin: the bleeding generally stops without any trouble, and a compress and bandage will nearly always effect the object. Should it be found difficult, and the occasional gushing forth of the blood render it probable that too much may be lost, it is best to divide the vessel completely; this facilitates the operations of nature in contracting and closing the ends: an *Aneurism* is sometimes the consequence (which see).

We have already alluded to the method of compressing and tying a lacerated or incised artery under the head of *Accidents.* Alum, Matico, Fungi, and various *Styptics* (which see), are recommended to stop arterial bleeding, but the only thing to be depended on is pressure, firmly and judiciously applied. Surgeons use either a pair of forceps, or what they call a hook-tentaculum, for taking up and tying arteries, which have become torn or severed; the knot tied is that known as the sailor's reef-knot (see *Bandages, Tying*), and the ends of the ligature are not cut off, but left hanging out of the wound; in the sloughing which ensues, previous to the healing of the wound, they loosen and are discharged.

ARTHRON (Greek for a joint) hence *Arthritis*, Gout; *Arthrodia*, a moveable joint in which the motion is slight and limited, as in the articulations of the clavicle, ribs, &c.; *Arthronydia*, pains in the joints;

Arthropyosis, abscess of a joint; *Arthrosis*, articulation or joint.

Articulation (Latin, *articulus*, a joint). The joints or articulations of the human frame are spoken of as **Moveable** (see *Diarthrosis*), divided into 1st, the Hinge-joint, as that of the Knee (see *Ginglymus*); 2nd, the Ball-and-socket-joint, as that of the Hip (see *Enarthrosis*): **Immoveable**, including, 1st, a Seam, dovetailing, or suture, as the bones of the Skull (see *Sutura*); 2nd, Harmony, or close-joining, as of the bones of the Face (see *Harmonia*); 3rd, Nail-like fastening, as of the Teeth in their sockets (see *Gomphosis*): **Mixed** (see *Amphiarthrosis*) Articulation with Obscure Motion, as that of the Vertebræ.

From the above root comes, also, *Articularis*, relating to joints; particularly applied to the arteries given off from the *Popliteal* (which see).

Arum Maculatum. The Spotted Arum, commonly called Wake-Robin, or Cuckoo-Pint, a plant of the natural order *Araceæ*, formerly called Starch-Wort, because the starch procured from the roots was used for stiffening ruffs; has large glossy halbert-shaped leaves, with purplish-black spots, and a tall pale green sheath, which opens about May, and displays a column of yellowish-green, with a spike of a brownish-red; these, the country children term "Lords and Ladies;" by about the end of August, a cluster of scarlet berries may be seen to crown the top of the naked stalk, glowing in the sunshine; they look very tempting, but are highly poisonous, as are, also the leaves, and, indeed, every part of the plant, the fresh juice of which is so irritant that it will blister the skin, as will, also, slices of the root; and yet Culpepper, following other old writers on medicinal herbs, recommends the juice as an antidote against poison or the plague. It was at one time employed as a remedy for humoral asthma, chronic rheumatism, jaundice, and visceral obstructions, the dose of the powdered root being from 10 to 30 grains, and of the fresh conserve from 1 to 2 drachms; but few practitioners order it now, the action of even small doses being too violent. A nutritious farina may, however, be obtained from the root by drying it in the sun, powdering, and then repeatedly washing it: it used to be sold under the name of "Portland Sago," much of it being prepared in the Island of Portland, where the plant was very plentiful. A celebrated Parisian cosmetic, called "Cypress Powder," is also made from the Arum root.

The *symptoms* of poisoning by this plant, are swelling of the tongue, constriction of the muscles of the throat so as to prevent swallowing, tremors, rigidity of the limbs, and sometimes violent convulsions. For *remedies*, the stomach-pump and emetics, with other means advised to counteract the effects of the vegetable irritants. See *Poisons*.

Artos (Greek for bread). The compounds are *arto-kreas*, bread and meat; *arto-gala*, bread and milk; *arto-meli*, bread and honey. The first and second compounds will be alluded to under the head of *Diet*, *Food*, and the second and third under those of *Cataplasms*, *Poultices*.

Arunda Saccharifera. The Sugar-reed, or Cane, sometimes called by botanists, *Saccharum Officinalis*. See *Sugar*.

Arytænoid (from the Greek *arytæina*, an ewer, and *eidos*, likeness). A term applied to the cartilages, muscles, and glands of the *Larynx* (which see).

Arytænoideus, is from the same root, and signifies a muscle arising from the root of one of the arytænoid cartilages, and inserted obliquely into the other; by their united action they open and close the *Glotis* (which see).

Asarabacca (Latin name, *Asarum Europæum*), belonging to the natural order *Aristolochiaceæ*, grows in the north of England in mountainous woods; has been found in Berkshire, near Maidenhead; blossom, greenish with purple-brown streaks on a short stem, with two grassy-green kidney-shaped leaves; properties, acrid, emetic, and purgative, and sternutatory or provocative of sneezing; but little used now except for the latter purpose, the form of administration being *Pulvis Asari Compositus*. The bitter principle of this plant is called *Asarin*.

The Canada Snake-root, or Wild Ginger (*Asarum Canadensis*), is an aromatic tonic, sometimes administered; dose of the powder, from 20 to 30 grains.

Ascaris (from the Greek *askarizo*, to jump). Parasitical worms found in various parts of the human body. See *Vermifuges*, *Worms*.

Ascensus Morbi (Latin). The increase or ascension of a disease.

Ascia (Greek for an axe or hatchet). A kind of bandage, so called by Hippocrates on account of its shape. See *Bandages*.

Ascites (from the Greek *askos*, a sack or bottle). Dropsy of the Abdomen. See *Dropsy*.

Asclepias Tuberosa (Swallow-wort.) An American plant, sometimes used as a diaphoretic in catarrh and rheumatism.

Asepta (Greek, *a* not, and *sepo* to putrefy). Substances free from the putrefying process.

Asparagus (Latin name, *A. Officinalis*), belonging to the natural order *Liliaceæ*. This common plant needs no description. The parts used are the roots which are strongly diuretic, aperient, and alterative, or deobstruent; their action depending upon the presence of an alkaloid, called *Asparagin*, given chiefly for dropsy, consumption, and undue action of the heart. Of the decoction of Asparagus, the dose is a teacupful three times a-day; of the extract from 20 to 60 grains; of the syrup, from 1 to 4 ounces, in the course of a day; the latter is sometimes given in *Phthisis*.

Aspen Bark. The bark of the *Populus tremula*, a tree common in this country; it is a valuable bitter, and is said to allay urinary irritation. See *Bitters*, *Tonics*.

Asphai (Greek, *a* not, and *saphes* clear) thick or defective utterance. From the same root comes

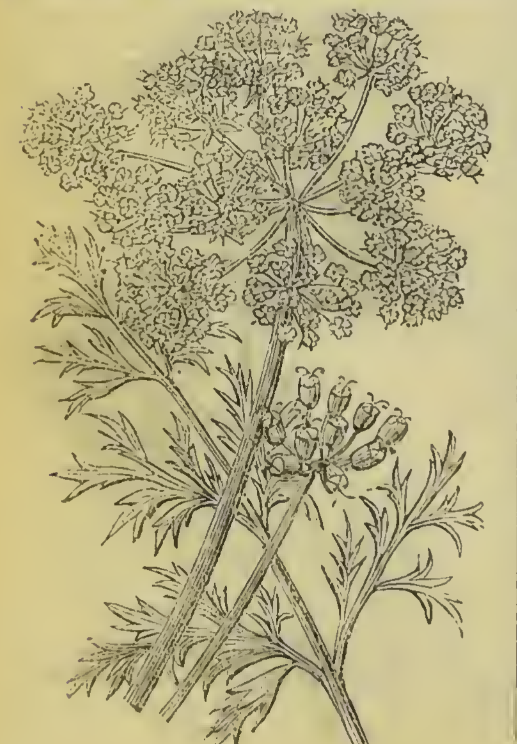
Asphati. A sort of serpego, supposed to be generated in the pores of the skin. (See *Herpes*, *Ringworm*, *Tetters*).

Asphyxia (from the Greek *a* not, and *sphyxis* the pulse). Suspended animation. This term was originally applied to interrupted pulse, whatever might be the cause of interruption; but, more recently, it has been held to signify suspended animation from Drowning, or Hanging.

Death from Asphyxia, then, appears to be that condition of the system in which the dark or venous blood, is interrupted in its course towards the lungs, where it would receive a fresh supply of oxygen, which would fit it for circulation through the body. The stoppage of this vital process causes a suspension of all the powers of sensation and voluntary motion. Respiration and pulsation cease, and if within a very short period the proper means of restoration are not employed, all hope of recovery is at an end. See *Drowning*, *Hanging*.

Aspulathus Canariensis. Rosewood, called by old writers *Rhodium lignum*. It is commonly used in this country as an ornamental wood; but four ounces of it shaved fine, and macerated in a pint of spirit, forms a warm balsamic cordial, of which from half a drachm to a drachm may be taken as a *Stomachic* (which see).

Assafœtida. This drug of an ill savour, is the concrete juice of the *Ferula Assafœtida*, natural order *Umbelliferæ;* it is antispasmodic, expectorant, stimulant, and slightly laxative; for hysteria, flatulency, nervous debility, hypochondriasis, spasmodic cough, asthma, and other affections of the chest, where there is not active inflammation, it is a valuable remedy; in typhoid fever, cholera, convulsions, and flatulent diseases of children, it is useful as an enema, 2 drachms of the gum being added to about a pint of thin gruel. The *Emplastrum Assafœtidæ* of the Pharmacopœia makes a good stimulant application to the chest of children with hooping-cough.



The chief officinal preparations into which this gum enters, are *Pilulæ Assafœtidæ; Pil. Aloes et Assaf.; Pil. Galbani Comp.;* of either, 10 to 15 grains; *Mistura Assafœtidæ* ½ an ounce to an ounce; *Tinctura Assafœtidæ*, a drachm; *Spiritus Ammonia Fœtidus*, ½ a drachm to a drachm.

Asses' Milk. Chemical analysis has shown that this milk, much recommended for invalids and delicate children, contains more sugar, and a smaller proportion of curd, than the milk of the cow; it is considered one of the best restorative nutrients for persons recovering from severe illness, and is especially good for consumptive patients, and for children brought up by hand. Either of the following artificial substitutes may be taken, when the real article cannot be procured:—Isinglass ½ an ounce, dissolve in a quart of Barley Water, add 1 ounce of Lump Sugar, then mix with a quart of fresh cow's milk, and beat up the whole together until it froths well. Or, take of Pearl Barley, Sago, and Eringo Root of each an ounce, add 2 pints of water, boil to one pint, strain and add 1 ounce of Lump Sugar, then mix with a quart of new milk: either of these should be warmed before taken, by immersing the vessel which contains it in hot water.

Assident Signs (Latin *assideo*, to sit by). Occasional symptoms of disease, which may be observed by one who watches, or sits by the patient.

Assimilation (from the Latin *assimilo*, to assimilate or become like). The conversion of the food into nutriment; this, as far as our knowledge goes, is chiefly effected in the *mesenteric glands* and *liver* (which see); the process appears to be from *albumen* into *fibrine* (which see): also *Chyle*, *Chime*, and *Digestion*.

Assodes (Greek *ase*, loathing). A continual fever, a prominent characteristic of which is a loathing of food. Some medical writers arrange it under the tertian remittents. See *Fever*.

Astacus. In Zoology, a genus of crustaceous animals, some of which are of a star-like form; hence the term is applied to a kind of *Cancer* (which see), whose ramifications spread out like the rays of a star,—in Greek, *aster*.

Asthenia (*a*, not, and *sthenos*, strength). Want of power, *Debility* (which see).

Asthma (Greek, *asthmazo*, to breathe heavily). This is a disease of the lungs, whose main characteristic is laborious breathing, which comes in paroxysms, and is accompanied by a wheezing noise. The attack commonly occurs in the night, the patient having gone to bed in a listless drowsy state, with a troublesome cough, oppression at the chest, and symptoms of flatulency; towards midnight probably the breathing becomes more laboured, the wheezing sound louder, and the patient is obliged to assume an erect posture, to prevent suffocation. Sometimes he starts out of bed, and rushes to the window for air; or he sits with his body bent forward, his arms resting on his knees, with a flushed or livid face, if it be not deadly pale, gasping and struggling for breath, in a condition painful to behold; the pulse is weak and intermittent, with palpitation of the heart; sometimes there is vomiting, with involuntary emission of the urine, which is of a pale colour, and relaxed bowels. The attack will probably last for a couple of hours or more, when the severe symptoms will gradually remit, with an expectoration of frothy mucus, and a tranquil sleep follows. For some days there will be felt a tightness of the chest, and the slightest exertion brings on a difficulty of breathing; there will be slighter paroxysms, and, after a longer or shorter period, another severe one.

Humid Asthma is that in which the attack terminates with expectoration, when it does not this it is called *Dry Asthma;* persons so afflicted have generally disease of the heart or lungs. When they have not, it is called *Spasmodic Asthma*, and to this persons are sometimes subject who, when the attack is past, may appear quite vigorous and healthy.

The *Causes* of asthma are hereditary predisposition; dwelling in a cold or moist atmosphere, or being subject to sudden changes of temperature; inward gout, intense study, or great mental anxiety; suppression of accustomed evacuations; irritation of the air cells and lungs by atmospheric impurities; irritation of the stomach, uterus, or other viscera.

Treatment. The objects to be attained in this are, first, to moderate the violence of the paroxysms; second, to prevent its recurrence. Where the patient is of a full habit, not advanced in years, and the disease is of no long standing, bleeding may be resorted to, especially if the face is flushed, and the pulse moderately strong. But this must not be attempted if the disease has become chronic, and the patient is elderly, especially if the face during the attack is preternaturally pale and shrunk. In either case gentle aperients should be administered, and anti-spasmodic mixtures and injections; a blister on the chest will often afford much relief. The following is a good formula for the mixture:—Tincture of Assafœtida and Sulphuric Æther, of each 2 drachms; Tincture of Opium, 1 drachm; Peppermint Water, 6 ounces; mix and take a tablespoonful every hour. If the expectoration is scanty and difficult, add to this, Tincture of Squills, 2 drachms; Wine of Tartarized Antimony, 1 drachm; or make the vehicle, instead of Peppermint Water, Mixture of Ammoniacum, that is about 2 drachms of the gum rubbed down with six ounces of water. The best aperient is Castor Oil, given in Peppermint, or weak Brandy and Water. Where there is reason to suppose the stomach is overloaded, an emetic, composed of 1 grain of Tartarized Antimony, and 1 scruple of Powder of Ipecacuanha, in half a tumbler of warm water should be given. The enema thrown up may consist of 2 drachms of Gum Assafœtida to a pint of thin gruel. Tincture of Lobelia Inflata is good in obstinate cases, dose 1 drachm; and also Tincture of Nicotiana, or Tobacco, in nauseating doses; inhaling the fumes of the leaves of this plant through a pipe, and also of Stramonium, is sometimes of service, and the good effect of either will be assisted by a cup of hot coffee, putting the feet in warm water, or using the warm bath.

To prevent the return of a paroxysm of Asthma, avoid the exciting causes, keep the bowels gently open with Rhubarb or some other mild aperient, and strengthen the tone of the stomach, by bitter infusions, such as Chamomile or Gentian; if there is tightness of the chest, put on a blister, and take an emetic now and then to clear out the phlegm from the bronchial passages; take at bedtime 10 grains of Dover's Powder, or the same of compound Squill Pill, with a little warm gruel. For the rest, take light and nourishing diet, avoiding everything difficult of digestion, wear warm clothing—flannel next the skin—have regular and moderate exercise, change of climate if possible should the situation occupied be damp, or bleak and exposed. Do not indulge in sensual or intemperate habits.

Astragalus (from the Greek *astragalos*, a die). The ankle-bone, so called because the analagous bones of some animals were used by the ancients as dice. See *Ankle*.

Astringents (Latin *astringo*, to bind). Remedies which act by contracting the animal fibres, and rendering the solids denser and firmer; hence, by causing greater compression of the nervous fibrin, they lessen morbid sensibility or irritability, and thus serve to diminish excessive discharges, such as *Fluxes*, *Hæmorrhages*, *Diarrhœa*, *&c.* (which see).

The following is an alphabetical list of the chief astringents used, with their respective doses:—

Acid, sulphuric, dilute,	dose	10 drops	to 1 drachm.
Acid, gallic	,,	5 grs.	to 10 grains.
Alum	,,	10 ,,	to 1 scruple.
Ditto, dried	,,	5 ,,	to 1 ,,
Arsenic, oxide of . .	,,	1-10 ,,	to ¼ grain.
Bistort, root of . . .	,,	10 ,,	to 1 drachm.
Catechu	,,	10 ,,	to 1 scruple.
Copper, sulphate of .	,,	¼ ,,	to 5 grains.
Galls	,,	2 ,,	to 10 ,,
Ditto, tincture of . .	,,	1 dr.	to 2 drs.
Iron, sulphate of . .	,,	1 grain	to 2 grains.
Ditto, filings of . .	,,	5 grs.	to 1½ drms.
Ditto, rust of . . .	,,	2 ,,	to 10 grains.
Ditto, muriated tincture of	,,	10 drops	to 20 drops.
Kino, tincture of . .	,,	10 ,,	to 20 ,,
Ditto, powder of . .	,,	10 grs.	to ½ drachm
Lead, superacetate of .	,,	½ grain	to 2 grains.
Lime water	,,	2 ozs.	to ½ pint.
Logwood	,,	1 ser.	to 1 drachm.
Ditto, extract of . .	,,	10 grs.	to 1 ,,
Pomegranate, flowers and bark	,,	1 ser.	to 1 ,,
Roses, red, the petals of	,,	1 ,,	to 1 ,,
Ditto, damask . . .	,,	1 ,,	to 1 ,,
Quicksilver, nitrate of	,,	⅛ grain	to 2 grains.
Sage, leaves of . . .	,,	10 grs.	to 1 drachm.
Simarobar, bark of .	,,	1 ,,	to ½ ,,
Saunders red, the wood	,,	1 ,,	to ½ ,,
Tanin	,,	5 ,,	to 10 grains
Tormentil, the root .	,,	10 ,,	to 1 drachm
Wortleberry bears, the leaves	,,	10 ,,	to 1 ,,

The following may be quoted as good forms of administration and application in most cases where astringents are required: For mixture, take of Muriated Tincture of Iron 2 drachms, Pure Water, or Infusion of Quassia 12 ozs.; 2 tablespoonsful three times a day. For pills, take Superacetate of Lead 12 grains, Opium 4 grains, Extract of Hemlock or Gentian, as the case may require, 2 scruples, and make into twelve pills; one three times a day, with a draught of Vinegar and Water. For gargle, Infusion of Roses 6 ounces, Alum 1 scruple, Oxymel, or Syrup, 6 drachms. For injection, Oak Bark, bruised, 6 drachms, Water 10 ounces; boil for ten minutes and strain; where there is an irritable state of the vagina or part to be injected, add to the above a little Linseed Tea or Mucilage. For ointment, Galls in powder 1 drachm, rubbed down with 1 ounce of hog's lard; this, or the Gall ointment of the Pharmacopœia, which has in it Opium, should be used for *Piles* (which see).

The action of *astringents* is sometimes confounded with that of *stimulants* and *tonics*, but there is an obvious distinction: the first, it is true, act by stimulating the parts with which they come in contact, and cause, like the second, sudden contraction of those parts; but this does not extend over the whole frame, nor is it followed by a relaxation corresponding in degree to its intensity; while the third named class of remedies do their duty slowly, and gradually restore the disordered functions to a healthy and vigorous action.

Ataxia (from the Greek *a*, not, and *taxis*, order). Irregularity, as of the menses, or other periodic discharges; a term applied to some diseases which are called *Atactic*.

Athamanta Meum. Botanical name for Spignel, a plant once celebrated for its peculiar influence in stimulating the lower viscera, especially the uterus and bladder. The same properties are said to reside in *Madder* (which see).

Atheroma (from the Greek *atherha*, pap). An encysted tumour, so called from the pap-like consistence of its contents. See *Tumours*.

Athyma (from the Greek *a*, not, and *thymos*, courage.) Lowness of spirits.

Atlas (from the Greek *tlao*, to sustain).

The uppermost of the Cervical Vertebræ, which supports the head, as the mythological Atlas is said to have done the world. See *Neck*, *Vertebræ*.

Atmosphere (from the Greek *atmos*, vapour, and *sphaira*, a sphere). The volume of air which surrounds our globe, and so largely affects, by its variations of character and condition, the human constitution. See *Air*.

Atom (from the Greek *a*, not, and *temno*, to cut). An ultimate particle of matter which cannot be further divided. See *Molecule*. The law of definite proportions in chemical combinations is called the *Atomic Theory*.

Atonic (from the Greek *a* not, and *tonos*, tone). Deficient in power, or tone, generally applied to a defect of muscular power, which is called *Atonia* or *Atony*.

Atra Bilis (Latin for Black Bile). A term for melancholy, hence a person of a melancholic temperament is said to be *atrabilarious*. See *Bile*.

Atresia (from the Greek *a*, not, and *trao*, to perforate). Imperforation; usually applied to a closed state of the rectum, urethra, &c. See *Anus*.

Atropa Belladonna (Deadly Nightshade). A poisonous plant of the natural order *Solanaceæ*. See *Belladonna*.

Atropine is the active principle of the above plant, one of those powerful alkaloids for whose discovery and production we have to thank modern chemical science; it is rarely or ever used as an internal remedy. See *Belladonna*.

Atrophy (Greek *a*, not, and *trophe*, nourishment). Emaciation, loss of strength from defective nutriment.

The *symptoms* are a gradual wasting of the body, loss of appetite, impaired digestion, depression of spirits and general languor; there is usually hectic fever, and often cough and difficulty of breathing. In children of scrofulous habit, who are especially subject to it, there is usually enlargement of the mesenteric glands, indigestion, costiveness or purging, uncertain appetite, flushed or pallid cheeks, loss of strength and spirits, remittent fever, a hard and turgid belly, and emaciated limbs.

The *exciting causes* are excessive evacuations, bad or insufficient food, excessive indulgence in venery or spirituous liquors, worms, unwholesome air, and mental uneasiness. In mothers it is sometimes brought on by continuing to give suck too long.

The *treatment*, of course, must depend very much upon the cause; if there is enlargement and induration of the glands, then their resolution must be attempted by stimulant applications, painting over with Tincture of Iodine, or rubbing in the Ointment of the same; administering tonics to strengthen the system, or absorbents. The following is a good formula:—Iodide of Potassium, 1 drachm; Compound Infusion of Gentian, 6 ounces; Aromatic Spirits of Ammonia, 2 drachms; mix, and take a tablespoonful three times a day, with a gentle alterative aperient at bedtime; say, Compound Rhubarb Pill, 3 grains; Mercurial Pill, 1 grain; every other night; unless there should be constipation of the bowels, in which case take every night.

As general remedies for Atrophy, may be mentioned that class of medicines called *Deobstruents* (which see), Mercurial and Antimonial preparations, Neutral Salts, Steel, Soap, and Hemlock: friction on the abdomen is good, and tepid salt-water baths; Tartrate of Potash, combined with Rhubarb, may be administered as a purgative. If, as is sometimes the case, it arises from a venereal taint, resort must be had to Mercurials and Decoction of Sarsaparilla, change of air and of diet, and abstinence from whatever may have given rise to the disease; we may also mention *Anthelmintics* (which see) where there are worms; *Antiscropholics* (see *Scrofula*) if required.

Atrophy is generally difficult to cure, and often terminates in *Dropsy* (which see). In all cases the patient requires wholesome and nutritious food, and such as is easy of digestion; milk, calves'-feet and other jellies, port-wine, bitters, &c.

Attenuants (Latin, *attenuo*, to make thin). Substances which possess the power of imparting thinness and fluidity to the blood; they may be divided into *Diluents* and *Solvents*. Among the first may be named Barley and Toast Water, and Whey; among the latter, Mercurials, Alkalies, Soap, Nitre, Sal-Ammoniac, Belladonna, Hellebore, Horseradish, Nightshade, and Broom (all of which see).

Attollens (from the Latin *attello*, to lift up). A muscle which draws any part upwards.

Attrahens (from the Latin *attratio*, to draw to). A muscle of the ear.

Auditory (from the Latin *audio*, to hear). Belonging to the organ of hearing, as, 1st. A process of the temporal bone; 2nd. Two passages therein, called *Meatus Auditorius*, *Externus* and *Internus* (outer and inner); 3rd. A nerve connected with the *Ear* (which see).

Aura (from the Greek *ao*, to breathe). A vapour; thus we have *A. Epileptica*, a sensation experienced in some cases of *Epilepsy* (which see); and *A. Seminalis*, the supposed fecundating principle of the spermatic fluid. See *Semen*.

Auricularis is a name sometimes given to the little finger, because it is commonly applied to the ear to remove any obstruction.

Auriculæ Cordis (Latin for auricles of the heart). A term applied to those cavities of the heart which lead to the ventricles. See *Cordis*, *Heart*.

Aurigo (Latin *aureo colore*, gold colour). A term applied to *Jaundice* (which see).

Auri Pigmentum (Latin for gold paint). Yellow orpiment. See *Arsenic*.

Auris (Latin for the *Ear*, which see). Hence *Auricular*, belonging to the ear; *Aurium tonnitus*, a ringing noise in the ear; *Auriscalpum*, an instrument for cleansing the ear; and *aurium sordes*, the wax of the ear.

Aurum (Latin for *Gold*, which see). Hence *A. fulminans*, a precipitate; *A. musivum*, mosaic gold, in reality the Bisulphate of Tin; *Auric Acid*, the peroxide of gold; and *Aurates*, the combination of *auric acid* with *alkalies*.

Aurantium, Latin for *Orange* (which see.)

Auscultation (Latin, *auscultare*, to listen). A term applied to all the methods of determining the nature and conditions of disease by a reference to the sense of hearing. It is, therefore, the science of sound as far as it relates to pathology. The sound may be either artificial or natural, as produced in the internal cavities by the action of the lungs, or other organs; or by percussion from without, and as distinguished by the unassisted ear, or by the aid of instruments. See *Stethoscope*.

Leopold Suenbrug, a Viennese physician, was the first introducer of this means of diagnosis, which he announced in a small Latin work, published in 1761, as an *inventum novum* (new invention). It was not until 1808, when Corrvisart, a French surgeon, translated his work, that the practical value of the discovery was recognized. Soon after this, the practice of auscultation became general in France, and spread from thence all over Europe, and, indeed, the whole civilized world: it received an immense impetus in 1816, by Laennec's invention of the Stethoscope, by means of which what is called *mediate auscultation* became practicable. The following is a synopsis of all the important signs recognizable by this method. I. *Natural Sounds*, divided into 1, Sounds having their origin within the chest: again subdivided into *a*, dependent on the motions of the heart, *b*, on the motions of the lungs; *c*, on the action of the vocal organs. 2. Sounds having their origin within the abdomen, subdivided into *a*, resulting from the movements of the intestines containing air; *b*, pulsations of the fœtal heart (see *Fœtus*); *c*, movement of the blood in the utero-placential arteries. 3. Sounds having their origin in the arteries. II. *Artificial Sounds*, divided into 1, Those produced by percussion of the surface; subdivided into *a*, those of the chest; *b*, those of the abdomen. 2, Those produced by the friction of the parts of a fractured bone. (See *Crepitation*). 4, Those produced by contact of instruments with *calculi* in the *bladder* (which see): also *Lithotomy*.

A delicate and well-practised ear can detect with great readiness the varieties of sound, often extremely slight, produced on striking the chest or abdomen with the finger or knuckles, by the action of the internal organs, or the passage of wind through the abdominal or other cavities; these sounds come like passengers from the inner world, and reveal many a secret of great import to the listening ear without, enabling the physician to form such a judgment of the state of the organs as to adopt the best means of arresting incipient diseases, or to greatly alleviate the symptoms of those more advanced. It must be evident, that this useful auxiliary to medical science can only be employed to advantage over some hollow part, that which is fleshy and dense emitting little or no sound on percussion. Indeed, it is only as applied to the great cavities of the *Chest* and *Abdomen* (which see), that it has been found of much service; these containing various organs of different degrees of density, with hollow spaces between, afford peculiar facilities for the transmission and reverberation of sound, which a very slight thickening of a membrane, or roughening of a surface by ulceration, or partial closure of a passage, will alter and modify. It is in these inner chambers, and corridors, and winding galleries, that disease, like a miner, works secretly, sapping the springs of life; and it is only by means of auscultation that its insidious operations are detected.

AUTOPSIA (Greek *autos*, one's self, and *optomai*, to see). A term applied to an examination of a body after death. See *Post Mortem*.

AVENÆ SEMINA. A common grain, the produce of the plant *Avena Sativa*. See *Oats*, *Oatmeal*.

AXILLA (Latin for the armpit). Hence *Axillary*, applied to the arteries, veins, glands, &c. of the *Axilla*.

AXUNGE, or AXUNGIA, Latin for hog's lard, and so called because used to grease wheels, from *axe rotarum*, a wheel, and *unguentum*, an ointment; this kind of fat forms the basis of most of the ointments of the Pharmacopœia. See *Adeps*, *Lard*.

AZOTE (from the Greek *a*, not, and *zoe*, life). An elementary gas, forming a constituent part of our atmosphere, and so called because it is, alone, incapable of supporting life; mixed with oxygen it forms Nitric Acid, and is therefore sometimes called *Nitrogen* (which see); in combination with hydrogen it forms *Ammonia* (which see); with carbon and hydrogen it forms *Prussic* or *Hydrocyanic Acid* (which see).

AZYGOS (from the Greek *a*, not, and *zygos*, a yoke). An anatomical term applied to parts which are single, and not in pairs, as many are.

BABLAH. A kind of tannin, prepared from the pods of the *Acacia Arabica* (which see).

BACCA, Latin for *Berry* (which see).

BACK (Latin, *dorsum*). That portion of the human body which extends from the neck to the loins downwards, and includes the dorsal vertebræ, the anterior portions of the ribs, with the muscle and skin which covers them. Pains in the back may proceed from various causes, such as an affection of the *Spine* (which see), or of the *Kidneys* (which see), *Rheumatism* of the muscles, *Lumbago* (which see), or they may be sympathetic; where they occur in females the mischief often lies in the *Uterus* (which see), also *Sprains*.

BACK-BOARDS. It was at one time very customary in seminaries to inflict torture upon children by making them stand for a certain time with the body upright, the head elevated, and the shoulders unnaturally thrown back; they being kept in this position by means of a piece of board, broad and flat in the centre, and rounded and tapering off at either end. This was the back-board, sometimes used as an instrument of punishment, sometimes under the impression that it would correct a tendency to stoop, and promote expansion of the chest and elegance of carriage; it is now pretty well understood that it effects none of these desirable objects, but, on the contrary, does much mischief, causing distortion of the spine by relaxing the muscles which are its chief support. See *Braces*.

BACON. This, we need scarcely inform our readers, is the flesh of the swine salted and dried, and sometimes smoked. As an article of diet for invalids it is very serviceable in some cases, especially where there is a deficiency of the biliary secretion. (See *Bile*). Very frequently, too, where there is loss of appetite, a delicate slice of bacon will tempt the palate; it is, however, somewhat indigestible, and should not be taken in large quantities, or habitually, by any one: for an invalid, a rasher for breakfast is best; it should not be too lean, and the best way to cook it is by broiling.

Balaustines. The petals of the *Punica granatum.* See *Pomegranate.*

Balbuties (Greek *babazo*, to babble), applied to *Stammering* (which see).

Baldness of the Head. This may result either from age or disease, although, in the former case, the age may greatly vary in different individuals, some becoming bald before they arrive at the middle period of life. This kind of baldness, like the change of colour in the hair, may often be observed to run in families, and to be, as it were, constitutional, and nothing can be done to check it; the commencement is always from the crown of the head, leaving a bare shining spot, which spreads with greater or less rapidity over the whole scalp, rendering, in some cases, a wig absolutely necessary; whereas if the baldness proceeds from disease, it may commence at the top, back, or sides, and at several places at once. See *Hair*, *Skin*.

Balenum (Greek *balaneion*, a bath). See *Bathing*, *Baths*.

Ball and Socket. A moveable joint or articulation, as that of the *Hip* (which see), and *Enarthrosis*.

Ballota. A Siberian plant generally called the Woolly Ballota (*Ballota lanata*), of the natural order *Labiatæ;* it is a sudorific and diuretic, and is given in gout, rheumatism, and dropsy, in the form of a decoction of the dried leaves and stalks.

Ballottement (French). A term applied to the falling back of the fœtus in the womb after it has been raised by the hand, and made to float in the *Liquor amnii.* See *Fœtus.*

Balusimus (Greek *ballizo*, to trip or caper), a term generally applied to those forms of palsy which are attended with fits of leaping and dancing. See *Palsy.*

Baker's Itch (Latin, *psoriasis pistoria*). This is the vulgar name for a species of scale, or scab, occurring on the back of the hand, to which bakers are especially liable; it is sometimes difficult to cure, but may generally be got rid of by cleanliness and attention. *Treatment.*—Sulphur, or Zinc Ointment rubbed in every night. Milk of Sulphur and Super-tartrate of Potash, in the proportion of 1 drachm of the latter, taken every morning in milk, or treacle, the dose being about a teaspoonful.

Balm, or Balm Mint *(Melissa officinalis).* A plant of balsamic odour, the leaves of which are used as a diluent in *Fevers* (which see). It belongs to the natural order *Labiatæ*, and has, like Thyme and Marjoram, stimulant and carminative properties, which render it valuable as a remedial agent. Dr. Copeland recommends it, infused with Liquorice-root and Seeds of Anise, Fennel, and Coriander; 2½ drachms each of the Balm and Liquorice, and ½ a drachm each of the Seeds, to two pints of Water. Dose from 1 to 2 ounces. See *Carminatives*, *Mints.*

Balsam (Latin *balsamum*). An unctuous, aromatic, healing substance, being the resinous extract, or juice, of several plants: it may be, 1st, *Semifluid*, as the Balsams of Peru and Tolu; the first being the produce of the *Myroxylon Peruiferum*, and the second of the *Myrospermum Toluiferum;* both, if they be distinct species, about which there is some doubt, plants of the natural order *Leguminosæ.* 2nd, *Solid*, such as Storax and Benzoin; both of which will be described under their proper alphabetical heads. The plants producing these belong to the natural order *Styraceæ.* The true test of a balsam is its capability of yielding *Benzoic Acid* (which see); but there are so-called balsams which do not this, such as Balsam, or Balm, of Gilead, or Mecca, the plant that produces which is called *Amyridis Gileadensis*, of the order *Amyrideæ:* and Balsam of Copaiva, the produce of *Copaifera officinalis* and other species, of the order *Leguminosæ;* these are both properly *Turpentines* (which see, also *Copaiba* and *Gilead, Balm of*), as is the Canada Balsam—much used as a varnish, but little, if at all, as a medicine. Friar's Balsam is the Compound Tincture of *Benzoin* (which see); and Balsam of Sulphur is a solution, in *Volatile Oils, of Sulphur* (which see).

Having thus cleared the ground, as it were, of the pretenders to the name, we will return to the true *Balsams*, and first speak of that of *Peru*, which is a good expectorant and stimulant, acting especially upon the mucous membrane, hence it is useful in non-inflammatory affections of the chest, chronic catarrhs and bronchitis, with debility; it is useful also in *chronic rheumatism*, *leucorrhœa*, *gonorrhœa*, and *amenorrhœa* (all of which see), and has been given with advantage in nervous diseases. Dose, from 5 or 10 grains to a drachm, in Mucilage, or made into pills with Liquorice Powder, three or four times a day. Externally, it is applied to wounds and ulcerated surfaces; and where there is a constant fœtid discharge from the ear, it may be mixed with three times its quantity of Ox Gall, and occasionally dropped in, the ear being previously syringed with soap and water. This balsam is a viscid liquid of a reddish brown colour, fragrant and aromatic smell, and hot and bitter taste; that of Tolu is of a much paler tint, generally as light as straw, and although fluid at first is seldom or ever sold in that state, as it soon becomes concrete: it has a peculiar and agreeable fragrance, and a warm sweetish taste; if dissolved in a solution of potash, the odour which it emits has a faint resemblance to that of the clove pink; its medical properties are stimulant and expectorant. It is good in asthma, chronic coughs, gleets, &c., although, on account of its highly stimulating nature, it should be cautiously used; its officinal preparations are the Compound Tinctures of Benzoin, and Balsam of Tolu (the latter is found only in the Edinburgh Pharmacopœia), and Syrup of Tolu, a favourite and pleasant remedy for coughs in children. *Dose*,—Half a drachm to a drachm. It is often combined with Oil of Almonds, which greatly assists in allaying irritation of the mucous membrane (see *Expectorants*, *Coughs*). There is also a Tolu Lozenge, good for both adults and children; it may be prepared as follows:—Lump Sugar, 8 ounces; Cream of Tartar, 1 ounce; Starch and Gum Tragacanth, of each in powder 2 drachms; put together in a pipkin, or glazed iron saucepan, and add 4 ounces of water; let the whole simmer together for half an hour or more, stirring occasionally, then add Tincture of Balsam of Tolu, or Peru, 2 drachms; mix well; pour out in a well-greased shallow vessel, and set aside to cool. Either of these balsams may be suspended in water by means of mucilage, or the yolk of an egg, and so exhibited. The doses are from 10 to 40 grains.

BAMBALIA (Greek *bambaino*, to lisp or stammer). This is a kind of St. Vitus' Dance, in which only the organs of speech are affected; its varieties are *Hesitation*, and *Stammering or Stuttering* (which see).

BANDAGES. There is not a more important art connected with household surgery than that of bandaging. To do it well requires much practice and no little judgment; even hospital dressers are not always perfect in this branch of their operations; and we have known "family doctors" make a sad bungle of bandaging a leg or an arm; on the other hand, we have seen it so deftly performed, that no piece of machinery work could excel it; so smooth and regular, so compact and firm, every fold and diagonal turn falling into its exact place, and maintaining its proper relative position; each layer of even texture fading off, as it were, from its fellow, and in turn supporting another, with no undue strain nor pressure on any part: the very perfection of close binding. We do not expect many of our readers to accomplish this; but it will be as well for them to understand *how* it is done, that they may, when the emergency arises, know how to go about it. First of all, let us ask what is a bandage? Something that binds, a fillet, a piece of linen or cloth for binding up a wounded limb. The material employed for this purpose is usually stout unbleached calico, from two or three to nine or ten inches wide, and from six to twelve yards long; the former length and breadth will do best for the leg. If commenced at the ball of the foot, and evenly applied so that each fold overlaps the other about one-third, it will reach to the knee; the following cut will best show the mode of application. The bandage having been first tightly rolled up, is taken in the right hand of the operator; the end is passed under the foot, and held there by the left hand until it is secured by one turn of the bandage over it; an upward direction is then taken, so that a couple of folds bring the bandage up to the front of the leg, over the instep; the next turn will naturally pass above the heel behind; and then, if proper care be observed, it will go on fold above fold, each overlapping the other slightly, all up the leg; the

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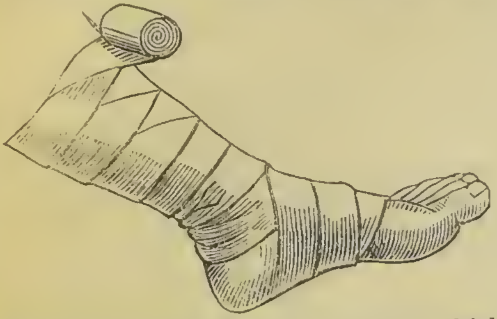
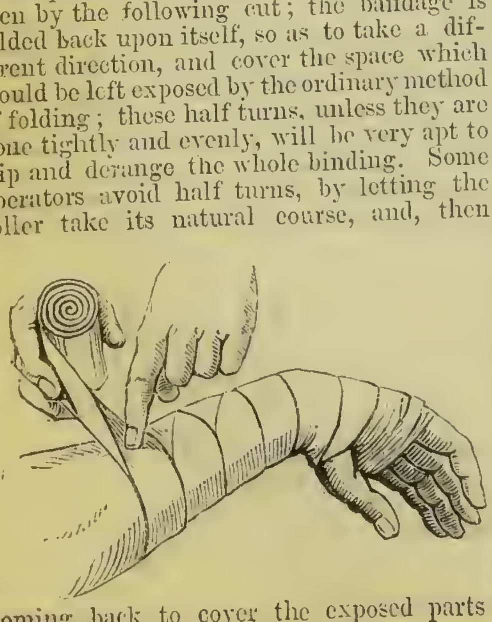
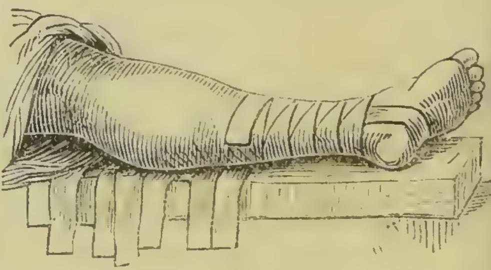
bandage is passed from the right to the left hand each time that it goes round the leg, and great care should be taken to hold it firmly, and equalize the pressure, as well as to smooth out any wrinkles that may occur in the process of binding. A firm and even support is thus afforded to the limb, which is not likely to crease, or get displaced by the motion which may be afterwards necessary; it may be made fast above the calf by a couple of pins, or a needle and thread. Great care should be taken in this, as in all similar operations, to get the bandage rolled up *tightly* and *smoothly*, before commencing, it may thus be grasped in the hand, and kept well under the command of the operator, who should on no account let go his hold of the bandage, so as to relax the pressure.



The arm does not require so long or broad a bandage as the leg; about two inches, by three or four yards, being the average size: this limb is rather more difficult to manage, half turns being necessary to effect a proper envelopment. How this is effected may be seen by the following cut; the bandage is folded back upon itself, so as to take a different direction, and cover the space which would be left exposed by the ordinary method of folding; these half turns, unless they are done tightly and evenly, will be very apt to slip and derange the whole binding. Some operators avoid half turns, by letting the roller take its natural course, and, then coming back to cover the exposed parts; but this method, besides requiring a larger bandage, does not effect the required purpose so neatly and efficiently. One mode of fastening a bandage is to split it up a short distance, so as to leave two ends, which can be passed round the limb, and tied. It should always be borne in mind that the chief art in applying bandages is to give firm and uniform support, without undue pressure upon any part; and to effect this properly, the strain in winding should be upon the whole roll held in the hand, and not upon the unrolled portion of it; and this strain should not be relaxed during the progress of the operation.



The next cut represents the mode of applying what is called a many-tailed bandage, useful to apply over a wound, or where ever it requires frequent changing, or in cases in which it is desirable not to exhaust the patient by much movement of the limb. This is a strip of calico somewhat longer than the limb to be enveloped; on it are sewn, at right angles, other strips, about one half longer than the circumference of the limb, each overlapping the other about one third of its breadth, so that when drawn tightly over in regular succession, each secures the other, the end of the strip passes under the heel, and coming up on the other side, is made fast to the bandage there, and so all is kept firm.



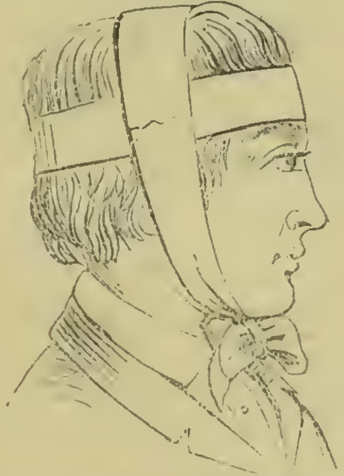
For keeping poultices on the lower part of the back, or in the groin, a cross bandage is used, the fashion of which is this: make a calico band large enough to pass round the loins, and tie a buckle in front; to this is attached another piece, which proceeds from the centre of the back to the anus, where it divides into two, which pass under the thighs, up on either side, and are fastened to the band in front. The bandage used to close a vein after bleeding is commonly called a figure of eight; it will be more fully described under *Bleeding*, *Venesection*.

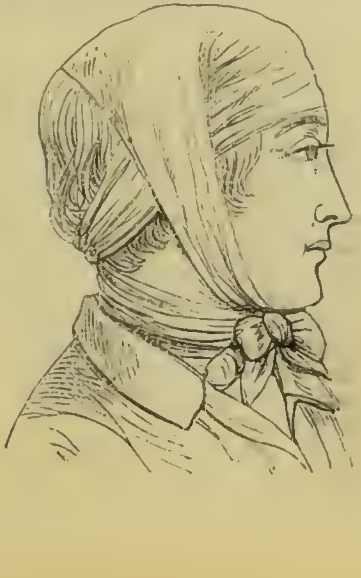
For a sprained ankle, place the end of the bandage upon the instep, then carry it round, and bring it over the same part again, and from thence round the foot two or three times, finishing off with a turn or two round the leg above the ankle.

For a sprained wrist begin by passing the bandage round the hand, across and across, like the figure 8; exclude the thumb, and finish with a turn or two round the wrist.

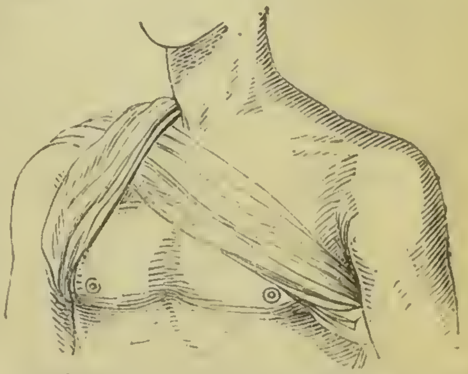
For a cut finger, pass the bandage, a narrow one, round the finger several times, winding from the top, and splitting the end, fasten by tying round the thick part above the cut; or if it be high up, tie round the wrist.

The best bandage for the eyes is an old silk handkerchief passed over the forehead, and tied at the back of the head. For the head itself, it is best to have a cross bandage, or rather two bandages; one passing across the forehead, and round the back of the head, and the other over the top of the head, and below the chin, as in the following cut. Or, better than this is, perhaps, a large handkerchief which will extend all over the forehead and crown, two ends of it passing to the back, and after crossing from thence round the neck, then tying the other two beneath the chin.



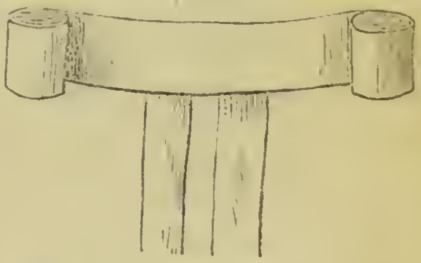


For a bandage to support a pad or poultice under the arm-pit, a handkerchief may be used, put on as in the following cut; or a broad piece of calico, arranged in the same way.



For fracture of the ribs, bandages should be about nine inches wide, and drawn round the body very tightly; in this case, as in that of any other fracture or dislocation, only a properly qualified person should attempt their application. See *Dislocations, Fractures, Slings.*

We have not yet spoken of the T bandage, which is simply a broad band to pass round the body or elsewhere, having attached to it one of the same width, or narrower, like the upright part of the letter after which it is named; or, there may be two stems, if they can be so called, in which case it is a double T bandage, as under.



Suspensory bandages, and elastic supports for pregnant women and obese persons, and other contrivances for spinal cases, will be spoken of elsewhere. See *Elastic Belts, and Stockings, Suspensories, Trusses, &c.*

Starch bandages are those in which the roller, before it is put on, is saturated in a strong solution of starch. Sometimes a covering of brown paper is put over this, and another dry bandage is applied; this makes a firm and compact case for the limb;

it is useful in cases of fracture, especially if the patient has to be removed to a distance. Sometimes, when it is not desirable to make the covering so thick and durable, the displacement of the bandages is guarded against by brushing a weak solution of starch or gum over the folds.

Bandaging should be performed in nearly all cases from the extremities upwards, or inwards to the heart, except where the injury is situated above the seat of vital action. If they give much pain there is reason to suspect inflammatory swelling beneath, and they should be loosened, if moistening with cold water does not relieve the pain. Flannel for bandages is used where warmth as well as support is required.

Bandy Legs. This term is usually applied to crooked or distorted legs, which may be so from birth, or have become so from neglect, or injudicious treatment. When children are suffered to walk or stand much before their legs are strong enough to support them, they are very apt to become deformed. Go-carts, and other absurd contrivances for early walking, are prolific causes of these distortions, which, if taken in time, can commonly be remedied, although they seldom can after the child has attained the sixth or seventh year. Daily rubbing on the convex side of the legs, and a judicious use of the bandage, are the best means of cure, together with salt-water bathing, tonics, and good nourishing diet. A pair of light irons may sometimes be used with advantage, but these should be skilfully made; if too clumsy and weighty they will do more harm than good. Above all, patience and perseverance, on the part of those who attend to the patient, are required. With females, bandy legs are more serious deformities than with males, as they are frequently connected with malformations of the pelvis, and other bones which enclose the uterus, and so interfere with the formation, growth, or delivery of the fœtus.

Banos de Tierra (an Earth Bath). A continental remedy for certain diseases, introduced by a once celebrated physician named Solano de Lagne. It consists in burying the patient up to his neck in fresh mould. It is seldom, or ever, practised in this country.

Barbadoes Tar. This is a natural naphtha found in the island from which it takes its name, and some other places within the tropics. The natives of the parts where it is produced use it as a sodorific in disorders of the chest and lungs; the dose is from 10 to 30 drops; they likewise apply it as a discutient, and as a preventive against paralytic disorders. See *Naphtha*, *Tar*.

Barbadoes Leg. See *Elephantiasis*.

Barbarossa's Pill (*Barbarossæ Pilulæ*). This is an old formula consisting of quicksilver and rhubarb; it was the first internal mercurial medicine which obtained use and credit. See *Mercury*.

Barbery or Pepperidge Plant. *Berberis Vulgaris*, natural order, *Berberidaceæ*.

Barberries or Berberries have came much into use lately for making tarts and pies; they are a pleasant acidulous fruit, and may be eaten with safety; they are cooling, antiscorbutic, and deobstruent, containing *malic* and *citric acids*, (which see); hence they are useful medicinally in fevers, bilious disorders and *Scurvy* (which see).

The bark of the root of this plant is tonic and deobstruent; it is chiefly used as a remedy for *jaundice* and *dysentery*, (which see.) The dose of the infusion is from 1 ounce to 2 ounces twice a day.

The active principle of the bark, called *Berberine*, is also tonic, and, in large doses, laxative; it has been found useful in dyspepsia, with functional derangement of the liver; dose 4 to 10 grains; if more is given it acts as a purgative.

Bareges Waters. Are said to be peculiarly efficacious in the reduction of tumours; in indigestion, accompanied by heart burn; in jaundice and obstinate colic. The temperature varies from 73 to 120; they rise from several springs in the neighbourhood of the French town from which they are named, and are much like those of Aix. See *Mineral Waters*.

Barclay's Antibilious Pills. These pills have attained considerable reputation as a patent medicine; they are commonly sold in boxes at 1½d. and 2s. 9d. The following is the formula of preparation:—Extract of Colocynth, 2 drachms; Extract of Jalap, 1 drachm; Almond Soap, 1½ drachms; Gum Guaicum, 3 drachms; Tartarized Antimony, 8 grains; Oil of Juniper, Caraway and Rosemary, of each, 4 drops; Syrup of Buckthorn sufficient to form a mass, which divide into 5-grain pills, and take two when required.

Bark. There are many kinds of bark used in medicine, but that which is generally so designated is the Peruvian or Jesuits' Bark, in Latin *Cinchona*, whose tonic and febrifuge properties have long been known and highly valued: it is obtained from several species of plants belonging to the natural order *Cinchonaceæ*, found chiefly in South America. There seems to be some doubt as to which of these particular species yields the barks of commerce and medicine. Linnaeus confounded at least four of them under the trivial name *C. officinalis*, and botanists are now by no means agreed as to specific identity. This is, however, of little consequence as far as our purpose is concerned. The following cut will serve to give our readers an idea of the general characteristics of these plants; it represents the *Cinchona Cardaminica*.

The medicinal barks are generally distinguished as 1st, *pale;* 2nd, *yellow;* 3rd. *red;* the first, in reference to the plant, being the lance-leaved; the second the heart-leaved; and the third the oblong-leaved Cinchona Bark: the first is also called Crown Bark, its varieties are the Quilled and Grey Barks of Loxa, and those of Lima and Havannah; the varieties of the third kind are the smooth or Quina Rota, and the Warty, of Santa Fe. These kinds differ considerably in appearance; the quilled is in long pieces rolled up small, something like cinnamon; it is of a pale yellow or ashy colour, and breaks short with a clean fracture. The other two kinds are larger and coarser in appearance; the red is especially so; but they do not differ essentially in their qualities, although they do somewhat in intensity of flavour; the yellow is the most bitter, although less austere and astringent than the red, which is more nauseous than either of the other kinds.

Being powerfully tonic and antiseptic, Bark was first introduced into medical practice for the cure of intermittent fevers, but it has since been largely employed in general and nervous debility, fever, if of the typhoid kind, and gangrene. It has also been recommended for gout and acute rheumatism; during its exhibition, in such cases, great attention should be paid to the state of the bowels, purgatives being occasionally interposed.

The great objection to the use of powdered Bark is the quantity required to be taken, the dose ranging from 10 grains to 2 drachms two or three times a-day: milk is a good vehicle for it. Of the Infusion or Decoction, from 1 to 4 ounces is the dose: where it is desirable to combine cordials, the powder may be taken in Port Wine, or an infusion of the Bark may be made by pouring a pint of this wine, previously heated, over 1 ounce of the bruised Bark, and taking a wineglassful two or three times a-day.

Besides the Decoction, Infusion, and Powder, the following are forms of administering Bark:—Extract, and Resinous Extract, dose, 10 to 30 grains; Simple, Compound, and Ammoniated Tinctures, dose, of either, 1 to 4 drachms. There is also a Syrup and a Wine of Bark; and, for outward use, a Cerate, an Ointment, an Anaseptic Cataplasm, and a Powder of Bark with Myrrh. indeed, the combinations into which this useful ingredient enters are almost infinite. Where there is great irritability of stomach, Battley's *Liquor Cinchonæ* is, perhaps, the best form of administration; it may be obtained of any druggist, with full directions for use.

Bark is subject to extensive adulteration; the better are not only mixed with the inferior kinds, but frequently with those from which the active ingredients have been extracted by decoction or infusion: the quill, being that which fetches the highest price, the bark-gatherers sometimes call in the aid of artificial heat to give it that form, but by this process the quality is deteriorated; it may generally be known when this fraud has been perpetrated, by the darker colour of the bark, and by its exhibiting, when split, stripes of a pallid hue in the middle. When Bark is of a dusky colour, between a yellow and a red, it is either a bad species, or has been badly preserved. If perfectly good, it will be dense, heavy, and dry, with no smell of must, but a slight and very peculiar odour; the taste bitter, with a slight acidity, neither nauseous nor very astringent: if chewed, the fibres should not be of great length, nor stringy. But it is in the form of powder that Bark is most likely to be adulterated; all sorts of woody fibres are ground up and mixed with it, and the requisite colour is given with red and yellow ochre. Such adulterations it is almost impossible to detect. Willow and other Barks have been recommended as substitutes for the Cinchona, and these will be spoken of under the proper heads.

Since the introduction of the alkaloids *Quina* and *Cinchona*, in which the active principles of Bark reside, the Bark itself has fallen into comparative disuse, although some of the officinal preparations are yet frequently ordered by medical practitioners. Of Quina and its salts we shall speak elsewhere. See *Quinine*.

Barley (Latin, *hordei semina*). The seed of the *Hordeum distichin*, a well-known cereal plant. In its prepared state of Pearl Barley (*Hordeum perlatum*), it is a most useful adjunct to the medical practitioner; its decoction, commonly called Barley Water, is an agreeable and efficacious demulcent in affections of the mucous membrane, and a grateful and nutritious beverage in fevers; for the former purpose it is required much thicker than for the latter. The following is a good recipe for making plain Barley Water: Take 2½ ounces of Pearl Barley, wash it, and boil for a short time in half a pint of water, which pour off and throw away; then pour in four pints of hot water, boil down to two pints, and strain: this is an excellent diluent drink in fevers; it is very soothing for inflamed mucous surfaces, especially those of the urinary organs; it may be rendered more pleasant and useful as a fever drink, by the addition of a few slices of lemon. If a laxative is required, the compound decoction, prepared as follows, may be given: Sliced Figs and Stoned Raisins of each 2½ ounces; Bruised Liquorice Root 4 drachms; Water 1 pint; Barley Water, as above, 2 pints; boil down to a quart and strain. The demulcent properties of either of the above formulas may be increased by the addition of an ounce of Gum Arabic to each pint of the liquor. As a food for infants brought up by hand, simple Barley Water and Milk, equal proportions, sweetened with a little refined sugar, has been recommended; care should be taken to stop it, if the bowels should become relaxed with this diet. *Gruel*, for children, may be made of the Pearl Barley, or Robinson's Prepared Groats; for most, however, this diet, as a continuance, will be found too heating.

A *Barley Pudding*, good for invalids, may be made as follows: Add to 4 table spoonsful of Prepared Barley sufficient cold milk to form a thin paste, pour on it a quart of boiling milk, then add a small slice of butter, a tablespoonful of powdered lump sugar, sufficient lemon peel to flavour it, and two eggs, previously well beaten up; mix well, and let the whole bake for an hour and a half in a slow oven. This is very nutritious and easy of digestion; it may be rendered more palateable to some by the addition of a slice or two of lemon. See *Diet*.

Barium or Baryta. The former is the metalic base of the latter, which is a native earth, extremely ponderous, and a strong poison; the name comes from the Greek root *baros*, heavy. All the preparations of this earth are poisonous, and require caution in their employment; they are given as alteratives and deobstruents, in scrofulous and other diseases, which affect the skin, also in cancers. The Chloride of Barium, *Barii Chloridum*, formerly called *Baryta Murius*, is the preparation most used; the dose is from 1 to 2 grains at first, gradually increasing to 5 grains. Of the *Liquor Barii Chloridi* from 5 to 15 minims is given, and of the *Barii Sodidum*, and *Barii Iodidum*, from 1 to 3 or 4 grains. For an overdose of either of these forms, give in the first instance, Sulphate of Magnesia, or Carbonate of Soda, in solution, and follow it by frequent doses of dilute Sulphuric Acid in water. See *Poisons*.

Barometer (Greek, *baros* weight, and *metron* a measure). An instrument invented by an Italian named Torricelli, to determine the variations of the atmosphere by the expansion and contraction of mercury in a glass tube. See *Atmosphere*.

Barrenness. Defect of power in the female to produce offspring. This may be the result of malformation of structure in some part of the generative organs, or of functional disorders, which may result from local or constitutional causes. There are many popular remedies for this defect, some of them miraculous; but only the ignorant and superstitious will resort to them. None but a qualified practitioner should attempt medical treatment in a case of this kind.

Barry's Extracts. These were the first vegetable extracts prepared in what is called *vacuo*, the evaporation being carried on in a vacuum, caused by admitting steam into the apparatus, which resembled a retort with its receiver; the liquor to be evaporated was contained in a polished iron bowl. The extracts prepared in this way are generally green, and saline particles of a glittering appearance may be observed in them. Being prepared in a lower temperature than that of the ordinary method, they are thought to possess the virtues of the plants from which they come in greater perfection. The apparatus for making them has been much improved since its invention by Barry.

Baryphonia (Greek, *baros* heavy, and *phone* voice). Heaviness of voice, or difficulty of speaking. See *Huskiness*, *Voice*.

Basculation (French, *basculer*). A term used in examinations of the uterus in retroversion; it expresses half of what is called the *see-saw* motion, and is effected by pressing the fundus upwards, and drawing the cervix downwards.

Basilar (Greek *basis*, a base). A term applied to an artery of the brain, to a process of the occipital bone, and to several *Bones* (which see).

Basilicar (Greek *basilikos*, royal). A term applied to the large vein of the *Arm* (which see). The Basilic Vein is that most frequently opened in the operation of *Bleeding* (which see).

Basilicon Ointment, or *Yellow Basilicon*. This ointment was at one time of almost universal application, and is still a very popular dressing for cuts, abscesses, and local affections of any kind. See *Ointments*, *Resin*, *&c*.

Basilicus Pulvis, or *Royal Powder*. A preparation of Calomel, Rhubarb, and Jalap, at one time much used, but now seldom heard of under this name, although a combination of these ingredients is not uncommonly administered, in cases where strong purgatives are required.

Basis Cordis, Latin for the base of the heart, the broad part of which is thus called, to distinguish it from the apex, or point. See *Heart*.

Bath Waters. Every one knows that the city of Bath is renowned for its mineral waters, which are used both for bathing and drinking; in this city are the only hot springs which England possesses. Persons afflicted with gout, rheumatism, paralysis, liver and stomach complaints, resort to these springs, and very many find benefit from them. Those debilitated from a long residence in hot climates, from indulgence in excesses of various kinds, go to Bath, and enter those vestibules to the temple of Egeria, the pump rooms and baths; and if they do not always come forth renovated and restored, they seldom or ever fail to experience some beneficial results from the tonic and purifying properties of the waters, one pint of which contains about 15 grains of solid matter, consisting of Muriates of Lime and Magnesia, Sulphates of Lime and Soda, Silex, and Oxide of Iron. There is also a small portion of Carbonic Acid Gas, which causes the waters to sparkle and effervesce when first drawn, and gives a briskness and freshness to the taste, which renders them rather pleasant than otherwise. If not drunk directly, they become dull and vapid, and are then very unpleasant. See *Mineral Waters*.

BATHING—BATHS (Greek *balaneion*). By Bathing, we understand the whole or partial immersion of the body in any medium other than atmospheric air; it may be Milk or Oil, or Medicated Vapour, Salt or Fresh Water, Hot, Tepid, or Cold, as may be required; and we commonly understand Water to be meant when no other medium is expressed. As regards the mode of application, it may be total immersion of the body by Plunging or Dipping, by Shower, Vapour, Cold Affusion, Douche, Sponge, or Wet Sheet; to all of which methods we shall presently refer.

The object of Bathing, besides its great main object, bodily comfort and cleanliness, is to act upon the system through the skin, whose nervous irritability, sympathetic power, and extreme vascularity, and important functions as an excreting organ, admirably adapt it for absorbing and conveying through the whole system whatever may be brought into contact with it. On this subject we have already spoken under the head *Ablution*, and more will be said when we come to treat of the *Skin* (which see).

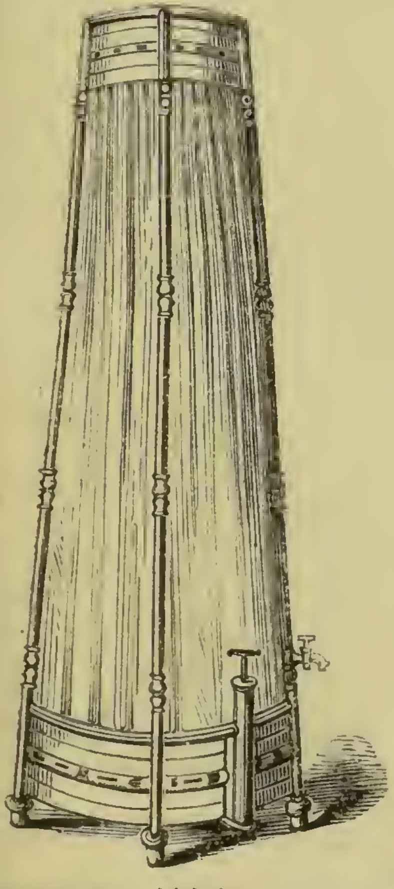
Bathing, as a means of promoting health and comfort, has in all ages been valued and practised in warm, and especially Eastern climes, as a source of voluptuous enjoyment, to a pernicious extent, on account of the enervating influence of the hot bath universally employed. In temperate climates cold bathing is more practised by those in health, and its effect is altogether beneficial when due moderation is observed, and proper times and seasons. The temperature of the cold bath may range from 40 or 50° up to 80 or 85° Fahrenheit; its effect upon the system varies in accordance therewith, as well as with the nervous energy of the bather, with the length of time he is subjected to its influence, and with the muscular action he exerts during that time. As a rule, ten or twelve minutes is as long as a person should remain in the water at one time, and but one bath should be taken during the day. The best part of the day is the morning before breakfast, especially for a strong vigorous swimmer; but one of weak and nervous temperament will do best to go in about noontide; with such a bather a change of the hour will make all the difference between agreement and disagreement. If he comes out of the water with fingers and lips blue, and countenance pale, and instead of the pleasant glow which ought to follow a bath, feels cold, languid and drowsy, and if a change of the hour does not mitigate or alter these symptoms of depression, he must give up the cold, and resort to the tepid bath, until the vigour of his constitution is in some degree restored. It is always dangerous to bathe after a full meal, or when exhausted by great bodily or mental exertion, and especially so when heated by running or other exercise; on the other hand, it is not well to immerse the body when it is in a chilled state, in this case reaction is doubtful, and the consequences may be bad. Even in cold climates, a plunge into icy water may be taken with safety by those in full health and vigour; it will not have so depressing an effect upon the system as remaining long in a bath of a higher temperature, especially if friction with some coarse material be used directly after—this should always be done after a cold bath.

Marine water is undoubtedly better for the bather than fresh, it exerts a more tonic influence, and its temperature is always more agreeable. The proper bathing season in this country is from the beginning of June to the end of September; the temperature of the water then ranges from 55° to 70° Fahrenheit. When it is colder than this, should bathing be ordered for medicinal or other purposes, resort should be had to

The Tepid Bath, which should be of a temperature varying from 85° to 94°, about 88° or 90° being the most convenient and agreeable standard. This relaxes and purifies the skin, and promotes insensible perspiration, and is most generally applicable for purposes of cleanliness and comfort; it is very soothing and salutary in irritable states of the system, when the skin is dry or chafed, after a journey, or any other fatiguing exercises; but, like the cold bath, it should not be taken with a full stomach. As a remedial agent, it is good in ardent fever, where the temperature is a little above that of health; in diseases of the skin it often produces a salutary reaction; it is useful in chronic rheumatism, and gout during the attack; also in headaches, colds, inflammation about the head and throat. It has also been employed with good effect in obstructions of females (see *Hæmorrhagia*).

The Warm or Hot Bath is understood to range from 93° to 100° Fahr., the standard temperature being about 96°. It ought to be employed as a remedial agent only, being too enervating for other purposes; to promote reaction in various stages of coma or collapse; to allay fever, whether spasmodic or inflammatory, soothe convulsive action, or to cause fainting when it is desirable to relax the tension of muscles and sinews for the reduction of dislocations, opening of constricted passages, or other purposes. The hot bath has a peculiar tendency to allay local or general irritation, and produce sleep; in complaints of the kidneys and loins, and in puffy swellings of the legs it may be resorted to with advantage; it is applicable to weak and irritable constitutions which could not support the shock of cold immersions.

The Shower Bath is a modern invention; its construction is very simple: a reservoir at the top, perforated with small holes, with a plate of metal beneath, which can be withdrawn by means of a cord by the person inside, on whom the fluid falls through the perforations like a gentle shower. This receptacle is supported by three or four slight pillars or stems, which form the framework of the bath, and a support for the drapery falling down and enclosing all like the covering of a tent; within this, on a seat, with his feet in a pan or tub that receives the descending fluid, sits the patient. The above cut is given for the benefit of those who may not have seen a shower bath, and who desire to realize more fully than a verbal description may enable them to do the nature of the invention.



This is a valuable agent in the treatment of various affections, and is available for many cases to which the general cold baths would not be applied. Its especial advantages are, first, that the contact of the water, instead of being sudden and momentary, may be gradual and prolonged at pleasure; second, the first shock of the water falls, as it always should do, on the head and breast, without exposing those parts to the danger and inconvenience of contact with hard substances, to which they are liable if the bather plunges so as to immerse them first. These baths are becoming very common in well-appointed houses; they may be used for fresh or salt waters, cold or tepid, as required. They are by no means expensive; a small portable hand-machine of the kind for children has recently been introduced.

Shower baths have been lately used with good effect in the treatment of insanity; the most violent patient has been subdued by their sudden shock, and then tranquillized by their soothing influence; when thus quieted he should be taken out of the bath, dried rapidly, and put into a warm bed; calm sleep will generally follow; the application of this remedy should not be made again until symptoms of violence occur. Poor persons may make a rude, but effectual machine of this kind by suspending an old saucepan, with a hole in the bottom, to some holdfast in the ceiling; put a plug in the hole, with a piece of string attached, place a tub beneath, get into it, take hold of the string and pull out the plug, and down will pour the fluid upon the head and shoulders, passing from them all over the body. For purposes of decency, it is easy to attach an old sheet round the outside of the saucepan, and keep it out by means of a hoop or other contrivance. Thus every cottage may have its bath-room.

The Vapour and Hot-air Baths are useful for a variety of purposes; in paroxysms of gout, acute and chronic rheumatism, various skin diseases, ulcers, lumbago, and sciatica, they are applied with advantage; they are great promoters of perspiration, and have a tendency to relax the system. They have been recommended for the cure of chilblains, cramps, leprosy, yaws, female obstructions, dropsy. The forms of application are various; a very simple one, as good as any, may be extemporized thus:—Place on a fire, near which the patient can sit or lie, a small kettle of water, with a piece of metal tubing attached to the spout, the other end being conveyed beneath the blanket, or oil-cloth, in which the patient is enveloped; through this, when the water boils, the steam will pass, and spread itself under the coverlet. Another method is to place a vessel of boiling water beneath the coverings of the patient, and keep up the supply of steam by putting into it hot stones, or pieces of metal. Those who can afford the expense, may obtain more complex and perfect apparatus of various kinds of the manufacturers.

Medicated Baths are those in which the water is impregnated with certain mineral, vegetable, and sometimes animal, substances. Thus we have Sulphur, Chlorine, and Iron Baths, Aromatic, and Milk Baths; which, if properly prepared and applied, may be productive of very beneficial effects. The *Aromatic Vapour Bath* is prepared by passing the vapour of boiling water through aromatic plants, from which the active principles are thus carried off. A good *Alkaline Bath* may be prepared thus.—Subcarbonate of Potash 8 ounces; hot water about 20 gallons; employed as a revulsent in chilblains and sanguineous congestions. For a

Sinapized Foot Bath, add 4 ounces of Flour of Mustard to the above quantity of water; to determine the blood to the extremities, and thus relieve the head. This should not be used too hot. The *Mercurial Bath*, employed in venereal affections, is formed of Bi-Chloride of Mercury, from 2 drachms to an ounce to a gallon of water. The *Hand Bath*, or *Manulium*, is prepared with Mustard, or Carbonate of Soda; sometimes with Hydrochloric Acid. They are used in cases where there is a strong determination of blood to the chest, and more in French than English practice. The *Antimonial Bath* is composed of Tartrate of Potash and Antimony, of each from 4 to 8 drachms, and 20 gallons of water. The *Aromatic Liquid Bath* is made by boiling a quantity of aromatic herbs, such as Lavender, Mint, Pennyroyal, Rosemary, in a quantity of water, and then adding the decoction to the water in which it is proposed to bathe. The *Astringent Bath* is about half-a-pound of Alum to 20 gallons of water. The *Bran Bath*, good as an emollient in severe colds, may be made by pouring boiling water upon 4 pounds of Bran, making up the quantity to 20 gallons; if for the feet, for which it is an excellent application, of course, much less will do. The temperature should be about 90°. The *Hemlock Bath*, useful in some skin diseases, is made thus:—2 ounces of dried Hemlock; boiling water a gallon; let it stand for several hours, then strain, and bathe the part affected at a temperature of 90°. The *Nitro-Muriatic Bath*, useful in liver complaints, and where there are gall stones, is 1 pound of Nitric Acid and 1 pound and a half of Hydrochloric Acid, to 40 gallons of water; immerse the patient for a quarter of an hour once a day; this may be continued for a fortnight or three weeks. The *Sulphurated Bath*, useful in cases of itch and other skin diseases, is made by dissolving 4 ounces of Sulphuret of Potash in a pint of water, and adding this solution to the requisite quantity for immersing the whole person. Where sea water cannot be obtained, a composition for the *Sea Water Bath* may be made as follows:—For each gallon of water add Common Salt 3 ounces and a half; Sulphate of Soda, commonly called Glauber Salt, 1 ounce and a half; Chloride of Calcium half an ounce; Chloride of Magnesia 1½ ounce.

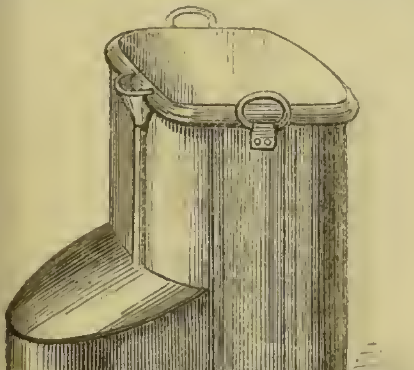
In bathing children, it should be borne in mind, that the power of producing heat in warm-blooded animals is at its minimum at birth, and increases successively to adult age; hence, the water that feels but cool to the nurse's hand, may be absolutely cold to an infant. Some persons are fond of what they call hardening their children, by plunging them into cold water in the winter; but this is a pernicious practice, and often produces disease of the lungs or of the digestive organs, *Scrofula*, or *Water on the Brain* (which see).

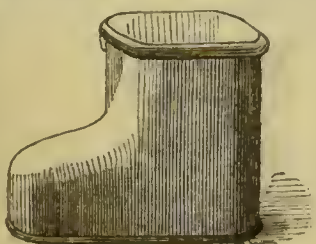
The Douche Bath may be either ascending or descending; in the former case the stream of cold water is projected into the rectum, or vagina, by means of a metal tube, called a *Canalus*, (which see). This is used in obstinate constipations, leucorrhœa and chronic affections of the uterus. The descending mode of application is simply pouring a stream of water from a vessel with a spout or nose, considerably elevated, on the part which it is desirable to stimulate; a small water-pot with the rose off is as good a vessel as can be employed, or a common jug will do. The person pouring the stream should stand in a chair, and let it come gently and steadily down on the weak member, a sprained wrist, or a leg or an arm which has been fractured or dislocated. In some of the bathing establishments on the Continent, the Douche is much employed, the stream being of great force and volume; with us it has not come into very general use.

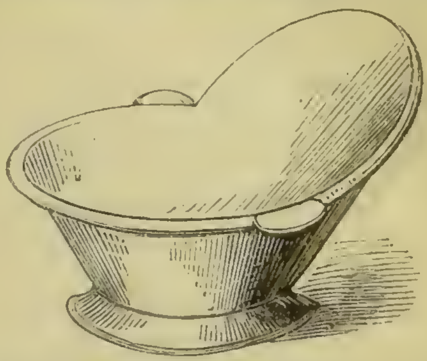
That which is commonly called *Cold Affusion*, viz., the pouring of a stream of water on the head, when it is desirable to ıke a sudden and powerful impression upon e system, is but a modification of the ouche; this is resorted to in cases of isoning by Opium, and other narcotics, as ·ll as by Prussic Acid, or the torpor ising from inhalation of the fumes of arcoal, and in hysteric Epilepsy, Lock-w, &c.; also in inflammatory affections the brain it is applied with benefit, even children. The water should be poured ı the head held sideways over a tub or n, from a height of several feet; if the tient is in bed, the head can be projected m the side of it; a large sponge, filled ith water, and squeezed from some height ı the head, will be sufficient for children: om 1 to 2 minutes should be the period of e application. See *Affusion.*

The Wet Sheet Bath is formed by en-loping the patient in a sheet which has en dipped in cold or tepid water, and then rung out; over this covering blankets are aped, and a copious perspiration is the sult. This, as well as the Douche enters rgely into the treatment of patients at dropathic establishments. See *Hydro-thy.*

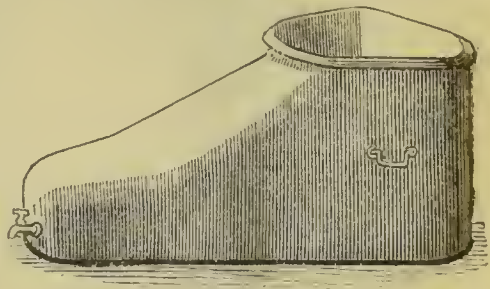
With regard to *shape* and *capacity*, baths ry greatly, those chiefly in use for house-ld purposes are the Slipper Bath, so called n account of its form, in which the whole erson up to the neck can be immersed; the lip Bath, and the Foot and Leg Bath,—These should be of stout metal, and well soldered and rivetted together. Every house should be provided with one, if not more of them, and every parish certainly should be provided with its moveable Slipper Bath, for the use of the poor.







There should also be a public Plunging and Swimming Bath, with the requisite accommodations for Tepid and Hot Baths, to which the poorer classes might resort. We all know how intimately health and cleanliness are connected, and as a sanatory precaution merely, it would be well to afford every facility and inducement for these classes to wash and bathe frequently. There would be less danger from epidemic diseases, which, commencing with them, frequently spread through the whole community, if the bath and the towel were in greater requisition among them. See *Ablution.*



Batter Pudding. This is a light and nutritious food for children and invalids; it should be made as follows:—Beat up three eggs in a basin with a pinch of salt, add 4 ounces of flour, and mix the whole into a smooth batter, adding by degrees ½ a pint of milk; put it into an earthen mould, or basin, well buttered, tie it lightly over with a pudding-cloth, place it in a saucepan of boiling water, let it boil about an hour; or else put it into a well-buttered dish, place it in the oven, and let it bake three-quarters of an hour; loaf sugar, with a little ginger and nutmeg, will make it more agreeable to the palate, and in this way it will be more wholesome, than with currants or raisins, which are often added to it.

Batter pudding may be made without eggs, by mixing 6 spoonsful of flour with a quart of milk, rubbing it down first with a small quantity, and, when smooth, adding the remainder, with a teaspoonful of salt, 2 of powdered ginger, and 2 of Tincture of Saffron; mix well, and boil or bake for an hour. Sugar may be put instead of salt, and a few currants; but it is perhaps best without the latter. See *Diet*, *Food*.

Battley's Green Senna Powder. This was at one time a favourite nostrum; it is supposed to have been senna leaves heated until they became yellow, and then mixed with powdered charcoal. See *Senna*.

Bdella (Greek *bdullo*, to suck). A horse-leech, or large kind of leech found in this country, and sometimes, though rarely, used for medical purposes. See *Hirudines*, *Leeches*.

Bay Leaves and Berries. This plant is the Laurel of antiquity, and the *Laurus nobilis* of Linnæus; it belongs to the natural order *Lauraceæ;* its leaves are much used for flavouring custards, &c., on account of the prussic acid which they contain, which is, however, not in sufficient quantity to be injurious, when mixed with other ingredients. Both the leaves and berries contain an aromatic and stimulant oil, and they were employed by the old herbalists to relieve flatulency; they are now seldom or ever used internally, but sometimes externally, as a discutient and stimulant fomentation. The oil extracted fro them is also made into a liniment; it known in commerce as *Laurel Oil* (wh see).

Bay Salt. It is a popular fallacy t this large-grained, and generally dirty, k of salt is a better preservative of meat th the finer and more common sorts, over whi if it has any advantage, it arises from dissolving more slowly when rubbed in. *Antiseptics*, *Salt*.

Bear's Grease. The much eulogi fat of the bear possesses little or no adva tage over several kinds of animal fat, though it is thought in a special manner promote the growth and glossiness of human hair. That which is sold in t country under the name of Bear's Grease in reality a preparation which is thus co pounded:—melt 3 ounces of Hog's Lard, ½ an ounce of Spermaceti in ½ a pint of of Sweet Almonds, stir together, and wh nearly cold, add a few drops of Essence Burgamot, or of any other perfume; k stirring until quite cold, then put into c cream pots, and keep closely covered. *Hair*.

Beburina. An alkaloid derived from bark of the Green-heart Tree, *Nectand Rodaei*, of the natural order *rosaceæ;* perties tonic and febrifuge. The Sulphat the only form generally employed; may ven in 2 grain doses twice a day, as a tonic ordinary cases of debility; in inter- ittent fevers from 10 to 12 grains are ven, and sometimes 15 grains during the termissions; it may be in pills with Con- ction of Roses, or mixtures with dilute lphuric Acid, and a little Tincture of ntian or Aurantia.

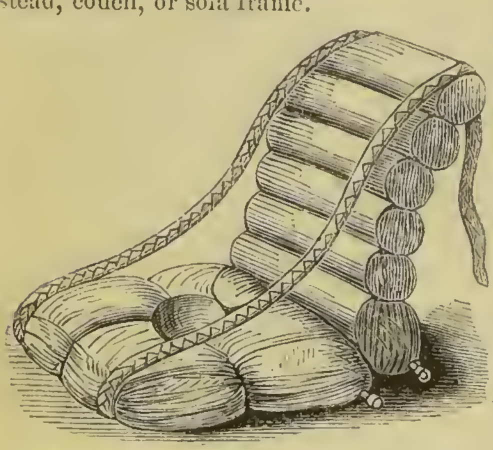
Bed. In our present highly civilized ate, we spend so large a portion of our time bed (about one third), even when in alth, that it of great importance for us to nderstand what is the best form, and mate- al, and condition, of this place of repose; d the Family Doctor would but ill perform s duty were he to omit laying down a few natory rules in relation thereto. We have ready spoken at some length (see *Air*) out *Bed Rooms*, and shall probably have ore to say on this head, when we come to *ickness*, and *Ventilation*, at present it will sufficient to observe that, for healthy per- ns, it is unadvisable to burn a fire or gas ght during the night: the former, while it urns briskly, promotes ventilation, by caus- g a current up the chimney; but very mmonly, towards morning, it sinks low, d has not sufficient power to cause a raught, and is only a consumer of oxygen nd a liberator of carbonic acid; such also is e gas burner, unless there be a tube over running into the chimney, and carrying f the noxious fumes. Most persons ex- erience a sense of insecurity when they re- ire to rest with the bed-room door open, yet his is the safest condition in which to sleep s far as the health is concerned; the air is hen constantly undergoing a change, and oes not become vitiated, as in a confined pace, where one or more persons, by breath- g, are abstracting its vital principle. A ght chain bolt will answer the purpose of ecurity, and enable the door to be kept jar; or if this is objected to, the upper annels may have perforated zinc plates let nto them, or some other contrivance, by which open spaces can be left; this is some- imes done with bed-room windows, and it nay be so managed, that the openings can e closed at pleasure. For the rest, have as ew obstructions to the free passage of air s may be; bed-rooms are far too much en- umbered by bed and window curtains, and ther drapery; if people knew the inesti- nable value of a pure and frequently changed tmosphere, they would not wrap and enclose hemselves as they do, shutting out their est friend, oxygen, and in their deadliest nemy, carbonic acid. Always let beds be stripped directly they are vacated, and the lothes thrown right off; unhealthy excretions are given off by all animal bodies in a heated state, and these must be dissipated as soon as possible, therefore open the window, and let the fresh breeze sweep through the room. Remove slops and dirty linen the first opportunity, and sweep out frequently, scattering tea leaves to keep the dust from flying; do not wet the floor in damp weather, but when it is fine and dry, this should occasionally be done, early in the morning, that it may be perfectly dry by night.

Beds are made of a stout material called "tick," and stuffed with feathers or wool, or woollen shreds; in the latter case they are called "flock" beds. *Mattrasses* are more tightly stuffed than beds, with hair or woollen material; they are quilted, and this and the broad distinct borders are obvious distinctions. *Palliasses* are in shape and appearance like the last kind of bed; they are commonly stuffed with straw, and are placed on the bedstead as a foundation for the mattress or bed. Children should never sleep upon feather beds, they are too soft and luxurious; the body sinks into them, and becomes, as it were, buried and surrounded by the yielding material. Perspiration, always profuse in the young, is promoted to a weakening extent, and the breathing too much confined. Hair, or cotton, or wool mattresses, are the best for juvenile sleepers, and indeed for all whose vital energies are not impaired by age or disease; although the feather bed, being the softest and most comfortable, is, and will be, almost universally used by those who can afford the luxury.

Hydrostatic or *Water Beds*, have lately come into use, chiefly for the sick; and, adapting themselves, as they readily do, to the shape of the body, they do not cause the distressing sores, which those long confined to a recumbent position frequently contract. The introduction of vulcanised India rubber into the manufacture of articles of utility, has rendered many contriv-

ances for the relief of the sick and suffering possible; thus we have elastic, and spring cushions, couches, and beds. The following cut represents one of these contrivances,—an air or water cushion, of waterproof material, which may be adapted to any elevation, for sitting or lying on, so that the patient may be relieved by a change of position, without the necessity for a removal to another resting place.

On page 87, we have a representation of an Invalid Mattress, or Hydrostatic Bed, which can be placed on any ordinary bedstead, couch, or sofa frame.



There are several makers of these extremely useful inventions in London; among the principal are Mr. Hooper, of 7, Pall Mall East; Messrs. Edmiston and Son, 67, Strand; Messrs. Matthews and Son (late Mackintosh), 58, Charing Cross; Messrs. T. Watts and Co., 466, Oxford Street, West; Messrs. Spencer and Co., 116, Fenchurch Street. The latter have recently introduced the *Adjusting Beds for Invalids*, a very simple and ingenious contrivance, by which those afflicted by bed sores may be easily relieved of any pressure on the tender parts, and by which also the bed pan may be introduced beneath the patient without the necessity for any alteration of place or position.

To keep a patient in a sitting position in bed, an ordinary light chair turned upside down and guarded with pillows, answers very well, in the absence of a more elaborate contrivance.

Bed Sores. Emaciated persons who have long been confined to bed, often suffer greatly from ulcers on the projecting parts, where the bones are unnaturally sharp from the absence of the fat which usually covers them: in such, the vital powers are at so low an ebb, that little or no resistance is offered to the destructive action of the sloughing process, which results from friction and excoriation of the parts. may generally be known when this proc is about commencing, by a slight inflami tory suffusion of the skin, and soreness the parts, and precautionary means sho be immediately taken. The best appli tion to try first is Collodion, brushed ligh over the inflamed surface, and this may done even if the cuticle is removed; causes a little smarting for a few minut but afterwards affords effectual rel Bathing the skin as soon as it becomes flamed, with hot brandy and water, or water with a little Tincture of Arni mixed in it, in the proportion of abou tea spoonful to a pint, and afterwards d ing the parts, and dusting them with Star Violet Powder, or Fullers' Earth.

One of the Water or Air Beds alre spoken of should at once be procured; if, in spite of all these efforts, the sores come, they must be treated as *Ulcers* (wh see).

Beef. This is the most strongly nut tious of all the kinds of animal flesh co monly eaten. but it is more difficult digestion than mutton, and is theref seldom recommended for invalids, exe in the form of

Beef Tea, which is a very import article in the dietary of the sick. In last stages of fever, or any other dise which results in extreme exhaustion, t is, perhaps, the form of nourishment wh is best adapted to produce a reaction in system, by the stimulus and support wh it affords. Beef tea is commonly made weak; the following is the form of prepa tion recommended by the great chem Liebig:—Take a pound of lean beef, p out all the fat and bone, if any, chop sm or mince, and mix it with its own wei of cold water, which slowly heat until reaches the boiling point, at which kee for a minute or two; then strain throug coarse towel; add a little salt, and a seasoning which may be desirable. Wh the exhaustion is very great, a couple tablespoonsful of brandy may be added the above quantity.

Beer. See *Ale*.

Bee's Wax (Latin *Cera flava*, or yell wax). Has been recommended by so surgeons as an application for old and in lent sore legs of working people: the m is to melt the wax and apply it with a br as cool as possible, short of setting. other uses, see *Cera*, *Wax*.

Beet Root. There are several species plants of the genus *Beta*, the succulent ro which are sweet and nourishing; one of most common in this country is the *ngel wursel*, much used for feeding sheep l cattle. In France, the Beet is largely tivated for the manufacture of sugar, ich, however, is not equal to that of the ıe for its sweetening powers. The root lf when boiled is easy of digestion, and night be used with advantage as a table getable, but its mawkish flavour renders distasteful to most palates. The large culent leaves of one species are eaten as ommon vegetable by the agricultural ourers of many parts of the Continent, l might, with advantage, be introduced re. The beautiful colouring matter of root is sometimes used to give a h tint to certain pickles, and it would be ll to substitute it for the deleterious ostances now employed in sweets and ıfections.

BELLADONNA. Deadly Nightshade, bonical name *Atropa Belladonna*, natural ler *Solanaceæ*. This is a very poisonous ınt, not uncommon in the hedges in some rts of England; it has a purple, bellaped blossom, about an inch long, and ong pointed leaves, growing on short ılks, generally in pairs; the stem is upght, stout, and rather hairy, sometimes ogether green, but oftener tinted with d: the berries are about the size of wild erries, of a dark purple colour, glossy, eet, and not unpleasant to the taste; nce they have been often eat by children, norant of their deleterious qualities, with tal results. *Belladonna* means literally ir lady, and was most likely given to this ant on account of the tempting appearance these berries: *Atropa* refers to its deadly operties, coming from *Atropos*, the ancient ıme of one of the fates, or evil destinies. he Saxons called the plant *Banewort*, or urdering weed. *Raging and Furious ightshade* are also old names significant its evil character. For cut, see *Atropa*.

The leaves, roots, and berries, indeed very part of this plant are powerfully narotic, and act in some cases as a diaphoretic, iuretic, and laxative. Medicinally it is mployed to alleviate pain, great nervous xcitement, and spasm; it is also useful in euraligic and convulsive affections, as well s in rheumatism, dysmenorrhœa, &c. In owerfully poisonous nature, however, renders great caution necessary in its administration, and it should never, on any account, e resorted to by unqualified persons. Dryness and constriction of the throat, dimness of sight, and giddiness, are the symptoms of he necessity for its discontinuance. The following are its officinal preparations with their doses:—Powdered leaves, 1 grain, once or twice a day, gradually increased to 2 or 3 grains, under careful supervision; the Powdered Root is sometimes, used, it is thought to be rather stronger; from ⅛th to ¼th of a grain is the dose for children; Extract, from ⅛th to ¼th grain twice a day, for a child 1-12th grain; Alcoholic Extract, from 1-6th to ¼th grain; Tincture, from 5 to 20 minims, equal to from ½ grain to 2 grains of the dried leaves; Atropine and Sulphate of Atropine from 1-30th to 1-6th of a grain; this is the active principle of Belladonna, and is seldom given internally in this country.

For external use it is employed in the form of Cerate, Cataplasm, Linament, Lotion, Oil, Plaister, Solution, Ointment. The vapour of the Decoction is sometimes inhaled to relieve asthma, and the Extract is applied to relieve pain, and dilate the pupil of the eye. (See *Nightshade*.)

BELLY. That part of the human body which contains the bowels or intestines, and reaches from the breast to the thighs. See *Abdomen*.

BENEDICTUS (Latin, *benedico* to bless). A term applied to several herbs and compositions, on account of their supposed good qualities; thus we have *B. Aqua*, Blessed Water, a compound of Lime water, and water distilled from Thyme; sometimes also applied to an emetic: *B. Laxativum*, Blessed Laxative, composed of Rhubarb and Senna; sometimes *Lenative Electuary*, or *Confection of Senna*, (which see.) *B. Vinum*, Blessed Wine, meaning *Antimonial wine*, (which see.)

BENZOIN. Gum Benjamin, as Benzoin is commonly called, is the balsamic resin of the *Styrax Benzoin*, natural order *Styraceæ*. It is a good stimulant and expectorant; and, when burned, its vapour is deodorant, and antiseptic; it is therefore useful in sick rooms and hospitals. When sublimed by heat, it yields the *Benzoic Acid* already described (see *Acids*); this, as well as the gum itself, is diuretic and useful in calculous disorders, especially where there are phosphatic deposits; its combinations with Ammonia, Potash, and Soda, called Benzoates of these alkalies, are more decidedly diuretic, and useful in dropsy and gouty concretions, &c. They may be readily prepared by adding Benqoic Acid to the alkalies. Benzoin mixed with ointment prevents rancidity; its vapour is thought to be good in hooping-cough; it is a common ingredient in cosmetic washes, and makes a good balsamic tincture for wounds and cuts. The Compound Tincture, under its popular name of

Friar's Balsam, has long been employed as a styptic and healing application; a piece of lint or soft rag dipped into it and wrapped round a cut finger, although it will cause smarting at first, will commonly stay the hæmorrhage, and effect a cure without the necessity for another dressing, unless the wound be very severe; it is also good for distressing coughs, the dose being from 30 drops to a drachm on lump sugar, or in mucilage; the dose of Benzoin is from 3 to 10 grains.

Beriberi or Barbiers. This is a disease peculiar to the East Indies and Ceylon, the characteristics of which, according to Dr. Mason Good, are "Spasmodic rigidity of the lower limbs, impeded locomotion, often shooting to the chest, and obstructing the respiration and the voice, trembling of the extremities, painful stupors, and general œdematous swelling." The most efficacious remedy for this disease appears to be Mercury administered in tolerably strong doses.

Beulah Waters. These are the waters of the Beulah Spa, a medicated spring, situated near Norwood, in Surrey, in the midst of delightful scenery, and very near to the world-famed Crystal Palace; their qualities are those of a carbonated saline aperient, somewhat stronger than the Cheltenham waters, as the following result of chemical analysis will show:—One pint contains 62 grains of Epsom Salts, 18 grains of Common Salt, 20 grains of other sa
matter, and 8 cubic inches of Carbonic A
See *Mineral Waters.*

Beverages. With these we have noth
to do, except in so far as they concern
sick room and the nursery. Beverages
the sick may be classed under one or ot
of the following heads: Aperients, Diluei
Febrifuges, Restoratives, Stimulants,
Tonics. In the first class we must pl
Seidlitz Powders and several of the *Min*
Waters (which see). The former may
prepared by first putting into a tumb
Bicarbonate of Soda 1 scruple, Potassio T
trate of Soda, or as it is sometimes call
Rochelle Salts, 1 or 2 drachms, pour
water, mix, and dissolve, then add 15 gra
of Tartaric or Citric Acid, and drink wl
in a state of effervescence. A little of
Powder or Tincture of Ginger may be ad
to prevent griping, and sugar to render
draught more palatable. It is good to t
this early in the morning, after a blue
at night, for functional derangement
the *Liver* (which see).

With the above proportions of Soda a
Acid various effervescing drinks may
made, which are very pleasant and refres
ing to invalids, especially in hot weath
thus for *Soda Water*, it would be sim
those ingredients; for *Potash Water*, rat
more diuretic, Bicarbonate of Potash inste
of the Soda; for *Lemonade*, the Soda a
Acid, with a few drops of Essence
Lemon, or a little Lemon juice; for *Orang*
ade, the same, with Orange juice to flavo
or better still, Syrup of Orange, to gi
sweetness as well; for *Ginger Beer* the sa
two ingredients, with a little Powder
Tincture of Ginger. Powders for the pr
paration of all these Beverages may
obtained of any druggist, and most of the
may, also, be purchased in bottles prepar
by machinery, which confines the Carbon
Acid gas in the liquid until the bottle
opened, when its efforts to escape causes t
sparkling effervescence which renders t
drink so refreshing; a portion of it is swa
lowed, and by causing eructation reliev
flatulency, especially when combined wi
Ginger or other aromatic spice. Hand
little portable machines for the preparatio
of effervescing drinks may now be pu
chased, they are inexpensive and very usef
in a family.

There is also a clever contrivance, b
which a bottle of Soda Water, or other b
verage, can be drank a little at the tim
without becoming flat and vapid; it is calle
an *Invalid Tap*, and is a small straight ta
furnished with a moveable point, which

ssed through a hole in the cork, pre- ously made with a borer; as soon as this int reaches the inner end of the cork it ls into the bottle leaving the tube of the open, into this the fluid passes, and out the other end, as soon as the valve is rned which obstructs its passage; the tap mains in the cork until the bottle is empty. this manner a bottle of champagne, or y effervescing drink, may be taken by a k person in small quantities, without the mission of atmospheric air to the fluid.

Cooling Acidulous Beverages may be ken with advantage during the summer all persons, whether well or ill; one of e most pleasant and easily prepared is at commonly called *Imperial*, it is pre- red thus:—Put 2 drachms of Cream of rtar, 2 slices of Lemon, and 2 ounces of ump Sugar into a jug, and pour on it a art of Boiling Water; let it stand until ol, strain and drink when required. nother, is a dessert spoonful of Raspberry inegar added to a tumbler of Cold Water: othing can be more grateful than this to e palates of those stricken with fever. *pple* and *Cranberry Waters*, again, are ry nice and refreshing; made, in the rmer case, by boiling two large apples, iced, and, in the latter, a cupful of the erries, in a quart of Water, with sugar and emon-peel to palate: sometimes a little Vhite Wine is added to the mixture, and Clove or two when it is desirable to make t more warm and strengthening; to make t nourishing for invalids, a little Oatmeal nay be stirred in while it is boiling. Then here are Beverages made by adding a table- poonful of Currants, or other preserved ruit, or jelly, to a tumbler of Water; the Black Currant is especially useful in colds ccompanied with hoarseness; this should e taken hot, after the patient is in bed, as hould, also, *White Wine Whey*, made as ollows:—To a pint and a-half of skimmed nilk, boiled, add 2 glasses of Sherry or Raisin Wine, 15 grains of Nitrate of Potash, and enough Lemon-peel to curdle the milk; oil up, and set it aside until the curds sink; train and sweeten.

Vinegar and *Lemon Wheys* are made by adding very gradually to boiling milk as much vinegar or lemon juice as will serve to curdle it, dilute with hot water, and add suggar to palate. This is less heating than the wine whey, and serves equally well to excite perspiration. *Rhubarb Sherbet* is an agreeable beverage: it may be prepared as under: cut up into small pieces about ½ a pound of Rhubard, stripped and cleaned, add to it a quart of Water, boil 10 minutes, and pour it while hot into a jug, in which has been previously put some Lemon Peel and Lump Sugar: when cold it is fit to drink. Other fruit sherbets may be prepared in a similar way. *Egged Wine* and *Egg Flip* are good cordial restorative beverages: the former is thus prepared: beat up 2 eggs thoroughly in a basin, with 1½ ounce of powdered Lump Sugar, and a little ground spices; heat ½ a pint of Sherry Wine and water, about equal quantities; when boiling pour it over the eggs and spice, stirring the while, then pour it from the basin to the saucepan, and back again, repeating the operation until it thickens. The flip may be made in the same way, putting strong Ale instead of the wine; a little Brandy is sometimes added. *Rice Water* is made by boiling ½ a pound of Carolina rice in a pint of water for 2 or 3 hours, adding towards the last a little Lemon Peel, with Nutmeg, Cinnamon, or Cloves, as may be preferred; strain while hot, and dilute with water until thin enough. This is almost the only diluent which may be safely given in diarrhœa; it should be taken cold, or nearly so, and is best without sugar, which is slightly laxative. *Barley* and *Toast Water* are two other invalid drinks which are much used. For the preparation of the former, see *Barley;* the latter, as most of our readers well know, is made by toasting a crust of Bread and plunging it, while hot, into a jug of Cold Water, or, as some make it, pour Boiling Water on a piece of Toast. There are many other beverages, such as *Capillaire*, *Spruce Beer*, the various *Possets &c.* (which see), but a mention of the above will be sufficient for our present purpose as far as adults are concerned; for children, the more simple the drinks are the better; pure Spring Water or Toast Water is that which should be habitually taken at dinner; for a weakly child, a wineglassful of ale or beer may be allowed, it should not be over strong, and home-brewed, if it can be had; three or four ounces a-day is as much as should be taken. Children are best without wine altogether; they require few stimulents, and their appetite is generally good, so that they take plenty of nourishment in the shape of solid food. See *Diet*, *Regimen*.

Bi or Binus (Latin *bis*, twice), meaning two, or a pair. Thus we have *Bi-ceps*, two-headed, applied to a muscle of the thigh, and another of the arm. *Bi-cornis*, two-horned, applied to the *Os-hyoides*, which has two processes or horns; and, formerly, to all muscles which have two points of insertion. *Bi-cuspidati*, having two spur-like tubercles, applied to the two first pairs of grinders in each jaw. *Bi-furcatum*, two-forked, the division of a vessel or nerve into two branches. *Bi-gastor*, two-bellied (see *Digastrinus*). *Bi-hernius*, having a scrotal hernia on each side (see *Hernia*). *Bi-lobus*, two-lobed, like the ears. *Bi-manu*, two-handed, like man, the first order of the class *Mammalia*. *Bi-mestris*, two months old. *Bi-oculus*, two eyes; a bandage for securing the dressings on both eyes. *Bi-torta*, twice-turned, applied to a root (see *Bistort*). *Bi-venter*, two-bellied, applied to muscles which have two sacs or cavities.

Bile (Latin *Bilis*). A peculiar oily or saponaceous fluid, secreted from the blood by the *Liver* (which see). In man it is of a brownish yellow colour, and bitter taste. Its composition, according to Berzelius, is as follows:—Water 908.4; Picromel 80; Albumen 3; Soda 4.1; Phosphate of Lime 0.1; Common Salt 3.4; Phosphate of Soda mixed with that of Lime 1, in 1000 parts. The process of secretion and diffusion of Bile appears to be this—the dark venous blood, passing through the liver on its way back to the heart, is there divested of its noxious matter, consisting largely of carbon, and so rendered fit for re-entering into the the arterial circulation. A portion of the matter thus separated from the blood is the Bile, which is discharged into the duodenum and there mixes with the digested food, and performs the important office of fitting it for absorption into the system; the Bile thus mixed with the elements of nutrition becomes also absorbed, and it appears likely that some of its constituents are intended and adapted to support the processes of respiratory combustion. It is the colouring matter of Bile, chiefly, which is discharged from the bowels of one in a good state of health, giving its peculiar tint to the excrements. When, owing to some functional derangement, this matter is absorbed into the blood and mixes with the circulation, we may observe this yellow tint on the surface of the skin. See *Jaundice*.

This divergence of the colouring matter from its proper course does not appear, however, to produce any very serious effect upon the system, but the elements of the Bile itself, if they are not properly mixed and assimilated, act like a narcotic poison, causing head-ache, sickness, and all that class of distressing symptoms which are included in the diseases generally known as *Liver Complaints*, or *Biliary Disorders*, as we should more properly term them; of these we will now proceed to speak, These disorders are of very frequent occurrence; and there is no doubt that, a vigorous st of the system cannot be, unless there i due secretion of Bile. Then, again, healthy action of the liver depends so mu upon the state of the stomach and digest organs; and all these parts act and react much upon each other, that there is f quent derangement and consequent ind position. Indeed, according to some thorities, "The state of the biliary syst depends upon the general state of the heal and the absence or redundancy of bile is the *cause* but the *consequence* of disease.'

Deficiency of Bile may be a symptom passive congestion of the liver, of orga disease of that organ, or of obstruction the biliary ducts; it may be known to e by the pale colour of the fauces, irregu action of the bowels; there is genera pain between the shoulders, a sensation fulness in the region of the stomach, great mental and physical depression. this case the remedial means to be taken the administration of about 3 grains of B Pill, or Grey Powder (Mercury and Chal every other night, with a small spoonfu Castor Oil, or a Senna draught each follow morning, with the following mixture 1 drachm of Carbonate of Potash, 2 drach Extract of Dandelion, 6 ounces Infus of Gentian or Calumba; take two tab spoonfuls two or three times a-day. T diet should be light and nourishing, quite plain; Pastry, Cheese, and Oily p parations of all kinds to be avoided; only exception being in favour of toasted broiled Bacon, of which a slice may taken for breakfast. Where there is mu debility, Malt liquor, Wine, and we Brandy and Water should be taken, daily exercise of a light, unfatiguing ch racter; the mind should be relieved much as possible of business cares and p plexities, and relaxation sought in cheer society; the pores of the skin relieved of structions, by tepid baths and sponging: the bowels are obstinate, it is better resort to clysters of warm water, wi perhaps, a little soap or salt in them, th to persist in the use of purgatives, wh have a weakening tendency. In the fi stages of the disease, the tongue is genera much coated, but after it has beco tolerably clean, 20 drops of diluted Nit Acid may be given with advantage, tw a-day, in Infusion of Dandelion Root, a perhaps, a bitter tonic such as Gentian Calumba. Children, especially those fair complexion and weakly habit, oft suffer from this deficiency of bile; but, this case, the correction of the misch should not be attempted with mercurials, although this is the course too generally pursued: 3 grains of the Grey Powder in combination with 5 grains of Rhubarb, may be given twice a-week, but nothing beyond this: the system must be strengthened by tonics, and a good supply of animal food. Calve's-foot jelly, milk, and eggs are good, if they do not disagree with the stomach: some preparation of Iron is the best tonic medicine for such a case; the following formula may be recommended:—Citrate of Iron, 1 drachm, Aromatic Spirit of Ammonia, 1 drachm, Cinnamon Water, 6 ounces; take a tablespoonful twice a-day. Salt-water bathing is also likely to prove beneficial, in the open sea, if in the summer months.

Redundancy of Bile. This may be a symptom of active congestion of the liver, and will, it is likely, result in *Bilious Diarrhœa*, or what is commonly called *English Cholera.* The cause of this form of disease is very commonly excessive indulgence in the pleasures of the table; more carbon is taken into the system in the shape of oleaginous, fatty, and saccharine matter, than can be absorbed and assimilated; the biliary passages, or ducts as they are called, become clogged, respiration is impeded, and the whole work of digestion and nutrition, becomes difficult, if not impossible. Nature then makes great efforts to get rid of the superfluous matter; hence vomiting and purging ensue, but previous to this, the patient has admonitory hints in the shape of head-aches, accompanied by sickness, pains in the back and stomach, heat and constriction in the throat, a weight at the chest, and dimness of vision, with floating specks, and other optical illusions. Idle and sendentary habits also, and breathing an impure and heated atmosphere are causes of excessive secretion of bile. Large and luxurious eaters should also be great walkers; it is only by physical activity that the functions of respiration, circulation, &c. can be kept in healthy action; and if much is given for these organs to perform, they should at least have all the assistance which can be rendered them; but those who lead luxurious lives are seldom very active in their habits, hence bilious complaints are common among them. That want of exercise has much to do with biliary derangements is proved, by their greater prevalence among females, especially of the middle and upper classes; they would no doubt be much more prevalent with them, were it not for the periodic relief which the system finds in the menstrual discharges, the stoppage of which often causes a bilious attack. It may generally be taken for granted, when sick head-ache and other symptoms of a redundancy of bile ensue, that there is something wrong in the diet or habits of the sufferer, let him eschew rich sauces and soups, curb his appetite for wines and strong meats, take plenty of exercise, and bathe frequently, that the skin may be in a condition to perform its work of excretion, and he will no doubt be able to do without blue pill and purgatives. Still there are many cases, in which this excess of bile proceeds from other causes than those above alluded to. Abstemious livers, of spare habits, who take plenty of exercise often suffer from it, and sometimes very severely; the cause with them may be some organic defect which prevents the absorption of the carbonaceous matter taken as food, or the stoppage of the biliary secretion to its proper destination. The medical practitioner, whom they may consult, will seek out the cause, and direct his remedies to operate upon that; we can only prescribe generally. An avoidance of animal fat, much sugar, strong tea or coffee, spirits, and the heavier wines—such as port; if malt liquor is taken, let it be bitter, or some light ale, and of this not much; milk and eggs are not good to take regularly, although a little of both in beverages and puddings, will not hurt. The meat should be plain and well cooked, taken with bread or well boiled vegetables; the puddings of a farinaceous kind, and fruits ripe and unripe may be eaten sparingly. Open air exercise should be *regularly* taken, and the skin kept clean; if stimulants are required, a little Sherry Wine, or weak Brandy, or Gin and water will be best. For medical treatment, we would recommend pills composed as follows:—Compound Rhubarb Pill, 2 scruples; Blue Pill, 1 scruple; divide into 12, and take one or two occasionally. If the bowels are obstinate, a clyster composed of a pint of warm water, with a little salt or thin gruel, should be thrown up, or a dose of castor-oil taken in the morning. When the symptoms of a severe bilious attack come on, it is best to begin with a 5-grain blue pill at night, and a black draught in the morning, then follow up with the above.

Biliary Ducts. These are the passages or channels, through which the biliary secretion passes to the duodenum, and other parts of the system where it is required; there are three of them, called by anatomists, the *Hepatic*, the *Cystic*, and the *Ductus Communis Choledocus*, the latter term meaning a receptacle for bile. The last named of these is the common excretary duct of the Liver and Gall bladders; it is formed by the union of the two former, and is about three inches long, descending through the right border of the lesser omentum, and behind the duodenum to its inner terminatum, where it passes between the muscular and mucous coats of the intestine, and communicates with a papilla common to it, and the pancreatic duct (see *Ducts*). Congestion of these passages, is a not uncommon cause of biliary derangement, a partial or total stoppage of the flow of bile being the consequence. Among the *causes* may be named obstruction of the passages, by gall stories (see *Gall*); disease of the duodenum, at the parts where the ducts enter it; and the pressure of tumours upon the ducts in any part of their course. The peculiar disease which this congestion originates, is *Jaundice*, (which see).

Bilious or Yellow Fever is another disease, arising out of biliary derangement, it is sometimes called *Balum Fever*, or *Black Vomit*, and is a remittent fever, accompanied with yellowness of the skin, and vomiting of a black or dark brown fluid; these two symptoms are its invariable accompaniments, and they are attended with all the usual marks of fever in a high degree. This fever frequently attacks Europeans in the West Indies and other hot climates, and is extremely fatal, not above 1 in 20 persons affected by it surviving. It first comes on with weakness and pain in the limbs, head ache, heat in the eyes, parched mouth, the tongue is brown and furred, with red edges; there is a hard, quick, and full pulse, a dry hot skin, the bowels are confined, and the urine small in quantity and high coloured, commonly tinged with bile. In from twenty-four to forty-eight hours the fever reaches its height; and the powers of life sink beneath its fury; the pulse becomes almost imperceptible or intermittent, the breathing laboured and difficult; there is a distressing hiccup, continual vomiting of the black matter, and bleeding from the nose, mouth, and other passages, and very shortly exhaustion and death.

A milder form of Bilious, or as it is sometimes called *Gastric Fever* prevails in this country, the treatment of which varies but little from that prescribed in *Typhus* (which see). In this the mischief is almost wholly confined to the alimentary canal; the head is but little affected, and the febrile symptoms do not run high, therefore it is best not to administer violent remedies. If, as is commonly the case, there be diarrhœa, let it go on for a little time, as by this means the system becomes relieved of it superfluous bile; it must, however, be carefully watched, and checked, if the motion exceed three or four daily; if the motion should be very offensive, finely powdere vegetable charcoal may be given, 10 or 1 grains twice a day in water. After the firs week the diarrhœa should be stopped, an to this end an enema of Starch or Gum wate with Laudanum (20 or 30 drops for a adult) had better be tried, before recourse i had to medicines; should this not succeed Chalk Mixture, with a little Aromatic Confection, with 6 drops of Laudanum in eac dose, three times a day; or the following:— Diluted Sulphuric Acid, 3 drachms; Laudanum, 2 drachms; Water, 6 ounces; mi and take 1 ounce every three or four hours or after each loose motion. Should thes not have the desired effect, try these powders, one every six hours:—Powdered Opium and Rhubarb, of the former 1 grain, of th latter 12 grains; Bicarbonate of Soda, 1 grains divide in 6. If, on the contrary there is constipation of the bowels, administer a clyster of thin Gruel with Salt, o brown sugar, administering also Castor Oil or some mild aperient, should the operation be sufficiently copious. Should there b obstinate vomiting, give Soda Water or simple effervescing draught (see *Beverages*) if these fail, try Hydrocyanic Acid, in dro doses, in plain water, or either of the abov drinks; a blister to the pit of the stomac may also be applied, should other measure be necessary; and as a last resort, 6 grain of Calomel may be placed upon the tongue and washed down with a little plain water To restore the tone of the stomach an assuage thirst when the diarrhœa is stopped give acidulous drink of some kind. This is good formula:—Nitro-muriatic Acid, 1 drops; Lump Sugar, 1 ounce; Water, 1 pint half a tumbler to be given every three or fou hours. For restoring the strength of th convalescent patient, give Chicken Broth Beef Tea, Wine, and Bitter Ale; if the abdomen becomes swelled and indurated, let i be well rubbed night and morning with liniment composed of Turpentine and Swee Oil in equal quantities; in this case th gruel enema may be used with Castor Oi and Turpentine, of each about a table spoonful. The recumbent position should b maintained throughout the attack.

Bilious or English Cholera. Most commonly shows itself in the hot summer o autumnal weather, and its violence is i proportion to the degree of heat prevailing persons who go from a cold to a hot climat are often attacked by it; and it appears ikely that the change in the temperature causes some derangement in the biliary secretion, which becomes more acrid, or is more abundantly secreted than usual. A sudden obstruction of the perspiration by a chill, eating indigestible food, particularly, and fruits, will sometimes give rise to an attack; but it is likely that, they would not have done so but for some circumstance connected with atmospheric changes which were unnoticed. The characteristics of this disease are nausea, pain, and distension of the stomach and bowels, succeeded by purging and vomiting, for the most part of bilious matter; there are severe griping pains, cold clammy sweats, and frequently cramp in the lower extremities. Sometimes the attack is preceded by premonitory symptoms, such as languor, drowsiness, and headache, accompanied with pain between the shoulders, and flatulent distension of the abdomen. The countenance assumes an anxious expression, and becomes dark and bilious-looking; the tongue is hot and furred, the urine highly coloured, and the bowels either costive or greatly relaxed. On the occurrence of these symptoms, Calomel should be at once resorted to—a couple of three-grain doses, with an interval of a day between, each followed by a Rhubarb and Magnesia draught; the diet should be spare, and the only drink at dinner, toast-and-water, with perhaps a tablespoonful of brandy. By these means, a threatened attack may sometimes be warned off. On some occasions the symptoms are more formidable than those above described; in addition to which, in an aggravated degree, there is great restlessness and anxiety, utter prostration of strength, hurried respiration, hiccup, coldness, and, it may be, cramp of the extremities; feeble and intermitting pulse, and death within twenty-four hours. The extremely irritable condition of the stomach, renders the treatment in this disease somewhat difficult; luckily, simple diluents, such as Barley Water, or Toast-and-water, will often effect a cure; lumps of Ice put into the mouth, and allowed gradually to dissolve, will quench the thirst, cool the stomach, and often tranquillize the system, when Creosote and Prussic Acid fail to do so: these should be tried should there be occasion for them, the former in 5-drop doses, taken in thin Mucilage, and the latter in 1-drop doses in plain Water, or effervescing draughts. If the bowels are confined, place 5 grains of Calomel, with the same quantity of prepared Chalk on the tongue, and let it be swallowed with the drink; then administer enemas every two or three hours until the bowels act, fomenting the abdomen with flannels dipped in hot water, and applying thereto, if needed a large mustard poultice. If there is diarrhœa, give a compound Chalk Mixture something like this:—Prepared Chalk, 2 drachms; Powdered Gum Acacia, 1 drachm; rub down with oil of Cinnamon, 12 drops; add Tincture of Opium, ½ a drachm; Tincture of Cardamums, ½ an ounce; take two table spoonfuls every three or four hours. If there is great prostration of strength, give, as soon as the stomach will bear it, about 30 minims of Laudanum, in Brandy and Water, or Chalk Mixture; or an effervescing Saline Draught to which 20 minums of Aromatic Spirits of Ammonia has been added; or a couple of grains of Opium with double the quantity of Calomel, accompanied by such drinks as the above; if this is rejected an opiate enema may be tried, say a drachm of Laudanum in a pint of thin Mucilage; apply warmth to the surface of the skin and put the feet in a mustard foot-bath. When the patient is recovering, let him have perfect rest, and a farinaceous diet, with Beef Tea or Chicken broth. Stimulants should be cautiously and sparingly given, and the return to a more generous diet be very gradual. Bitter tonics, such as Gentian, and Calumba, or Cascarilla, will also be found useful.

Bilious Temperament. Its characteristics are strength of frame and determination of purpose; there are generally strongly marked features, and plenty of colour in the face; dark hair and eyes, and a steady unwavering glance; there is a full strong pulse, not often very quick, except under the influence of excitement. These are the sort of men who accomplish great things in this world; they are not deterred by slight obstacles, but go steadily forward in spite of them. The biliary secretions with them is plentiful but not redundant; the disorders to which they are most liable are those of the digestive organs, and *Hypochondriasis* (which see), also *Temperament.*

Binder. This is the bandage which is put round the abdomen of the mother at the commencement of labour. It should be sufficiently broad to envelope the whole of the lower part of the body; it may be a light table cloth or shawl, or a square of calico, folded like a cravat, so that while it spreads over and supports the belly, the ends may be brought round and tied in a double knot at the back. It should be outside of the bed dress, so as to be quite under the control of the nurse, who will have occasion to tighten and loosen it several times during the progress of the delivery; at first it should be tied so as to give moderate support to the abdomen without painful pressure; as parturition progresses, it should be gradually tightened, and when the birth has taken place, as much more so as can be borne with comfort. The regulated pressure which it exerts, no doubt assists the efforts of the womb to expel the fœtus, and the mechanical support which it affords, when the abdominal cavity is suddenly emptied, does much to obviate the sensation of utter exhaustion and faintness, which is sure to ensue; and if it is arranged previous to the delivery, there is no necessity for disturbing the patient, a matter of great importance in cases of flooding or hæmorrhage. An hour or two after the completion of labour, this bandage may be exchanged for the ordinary broad band, drawn tight, and fastened with pins, or better still, straps and buckles. See *Child-birth.*

Bistort (Snakeweed), botonical name, *Polyginum Bistorta;* natural order, *Polygonaceæ.* An astringent root, used in mucous discharges, passive hæmorrhages, and fluxes. Combined with the bitter and aromatic Flagroot (*Calamus*), it has been successfully exhibited for the cure of intermittent fever, and ague. The dose of the powdered root is from 1 scruple to a drachm; of the decoction, from 1 ounce to 2 ounces. The decoction is also used as an astringent gargle and injection. Its active principles are *Tannin* and *Gallic Acid* (which see.)

Bismuth (Sub- or Trisnitrate). This preparation is a heavy, white, inodorous, and tasteless powder, composed of Oxide of Bismuth in combination with Water and Nitric Acid. Its medical properties are tonic and antispasmodic; and it is especially useful in painful affections of the stomach, such as *gastralgia*, *cardialgia*, and *pyrosis* (which see.) It is useful also in checking the diarrhœa which attends typhus fever and consumption. In large doses it acts as an irritant poison, but it seems probable that this effect may be attributed to the presence of Arsenic, which it is likely to contain, unless great care is taken in the purification of the metal to be employed. In chronic dyspepsia this preparation may be given with good effect, combined with Rhubarb or Extract of Hops; in obstinate vomiting, it frequently acts beneficially, and has been recommended for cholera; if given in a mixture, it should be suspended in Mucilage; the usual dose is from 3 to 10 grains, two or three times a day; it should be taken after meals.

Bistoury (French *bistoire*). A small curved knife, used for opening abscesses, and for other surgical purposes.

Bitter. Applied to a class of medicines having a hot acrid taste, and mostly tonic properties (see *Tonics*). Some purgatives also, are intensely bitter, and are distinguished as such by this prefix; thus we have Bitter Aloes (see *Aloes*); Bitter Apple or Cucumber; Coloquintida or *Colocynth* (which see); *Bitter-sweet*, Latin *Dulcamara*, *Woody Nightshade* (which see); Bitter *Extracts*, and Bitter *Infusions* are those of Gentian, Calumba, &c.

The stimulating and strengthening drinks known as *Bitters*, are spirits in which some bitter herbs or roots have been steeped.

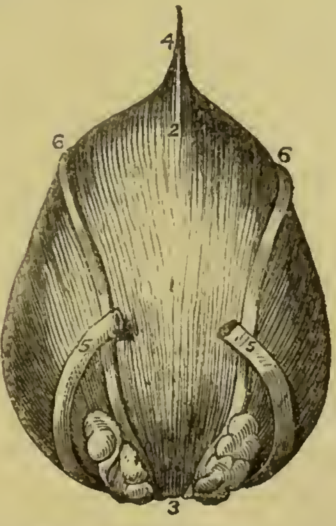
Black Drop. This is a preparation of Opium, about three times the strength of the common Tincture, or, as it is usually called, Laudanum; it was formerly a nostrum whose composition was kept a secret, but is now pretty generally known to consist of Opium, Verjuice, or Acetic Acid, Nutmeg and Saffron, Sugar and Yeast. Such are the ingredients of the Lancashire Black Drop, as it is called, but there are other formulas which we need not give. Those who prepare it now, would probably use Morphine, which is devoid of some of the stimulating properties of Crude Opium. See *Opiates.*

Black Draught. To this well known preparation frequent reference will be found in these pages; it is a mixture of Infusion of Senna with Epsom Salts, and Ginger, or Carraway, or some other aromatic, to correct its griping tendency. In most cases where a Saline Aperient is required, this may be safely administered; it is a certain and active purgative, well suited for those of a full and vigorous habit, but not for weakly constitutions; the best time to take it is early in the morning.

Black Vomit. The black or dark brown substance cast up in certain diseases, resulting from excessive secretion of *Bile* (which see), and *Bilious Fever*.

Black Wash. A lotion made of Calomel and Lime Water, in the proportion of ½ a drachm of the former to 6 ounces of the latter; a common application to venereal sores, and ulcerations of a syphilitic character. See *Syphilis*.

Bladder. A thin membraneous bag, which serves as a receptacle for the urine, secreted by the kidneys, until it is voided through the urethra. This organ is situated in the *pelvis*, just below the *pubic bone;* when much distended it rises above this into the abdomen: it is composed of four distinct layers, or coats, viz.: the external, or serous, muscular, areolar, and mucous, this latter being the lining membrane. The bladder is angular in shape, and flattened against the pubis, when empty; when full, a longish oval, as shown in the annexed diagram.



It is divided by anatomists into *body*, *fundus*, *base*, and *neck;* the first, comprehending the middle part of the organ (1); the second, the upper segment (2); the third, the lower and broader portion which rests upon the rectum (3); and the fourth, the constricted part, which in the male communicates with the prostrate gland, forming a passage into the urethra. The bladder is retained in its position by ligaments, which may be divided into true and false; altogether there are ten of them—five of each. See *Ligaments*.

In the preceding cut, which represents the posterior aspect of the male bladder, with the serous covering removed to show the muscular coat by which the contraction is effected; 5 5 are the membraneous canals, called *ureters*, through which the urine passes from the kidneys into the bladder; 6 6 are the *vasa deferentia*, and 7 7 the *vesiculæ seminales*, both of which are connected with the organs of *Generation* (which see). The triangular area enclosed between these vesicles and a line drawn from the upper edge of each, and the figure 3, representing the base, is called the *trigonum vesica*, and is the part which is pierced in puncturing the bladder through the rectum; to this extent the bladder is enfolded by the *Peritoneum* (which see). The ureters, which extend from each kidney to the back of the bladder, pass through the coats of this organ obliquely, so that when it is distended there is no return of the fluid. In the female the prostrate gland is absent, and the urethra, which in the male is about nine or ten inches long, and considerably curved, is short and straight. We will now proceed to speak of the diseases to which this organ is subject, and which in many instances are caused by negligence, or inattention to the periodic desire to void the urine.

Inflammation of the Bladder may be either acute or chronic; in the former case it is likely to be the result of a catarrh, which, after affecting the mucous membrane of the throat, nose, and chest, acts upon that of the urinary organs; if not from this, it may proceed from some accidental or local cause. But however this may be, the *symptoms* are much the same; there is severe pain and a sense of tightness in the lower part of the abdomen, with a constant desire to pass urine, which comes out cloudy or milky, and deposits pus or mucus at the bottom of the vessel; there is often, too, a feeling of sickness, and generally more or less of fever.

The *Treatment* in this case will be to give at once about 5 grains of Calomel, following it up with a Rhubarb draught, or some other mild aperient; the application of leeches to the lower part of the abdomen, with the use of a warm hip bath, to encourage the bleeding, the bath to be continued daily, or twice a day, if necessary; the use of diluents, such as Barley Water, or Linseed Tea, and abstinence from all stimulating drinks whatever: these means, with a rigidly abstemious diet, and rest in a recumbent position, will generally reduce the inflammation in the course of a few days; should they not, and should the patient be of a full habit of body, bleeding from the arm may be resorted to, and such other measures of depletion as may be necessary. The following is a good formula for a mixture: Nitrate of Potash and Tincture of Henbane, of each 2 drachms; Liquor of Acetate of Ammonia and Mucilage of Acacia, of each 1 ounce; Camphor Mixture 10 ounces: take 2 tablespoonsful every four hours. Injection of the bladder with warm water, or some emollient fluid, such as Infusion of Linseed, is sometimes resorted to with good effect. The suppression of urine, and consequent distension of the bladder, will sometimes cause inflammation of that organ; or it may proceed from a calculus of considerable magnitude lodged within it. See *Cystitis.*

If the inflammation be chronic, leeches are seldom required; in other respects the treament must be much the same as that above recommended. When this treatment does not afford relief, and the urine retains its acid quality, which may be known by its turning litmus paper red, $2\frac{1}{2}$ grains of Calomel, with 3 grains of Opium, should be taken three times a day; if the urine is alkaline, and deposits mucus of a brownish colour, the patient should take with each dose of the above mixture 15 minims of Wine of Colchicum: this is Sir B. Brodie's plan of treatment. Great care should be taken when the patient is recovering, as to the diet, and mode of living; a very slight excess in eating or drinking, or violent exertion, may bring on a relapse. It is well to take, for some little time, one of the following pills twice a week: Blue Pill, 12 grains; Ipecacuanha Powder, 3 grains; Acetous Extract of Colchicum, 6 grains; mix and make into 6 pills; an aperient draught of Compound Infusion of Senna, or of Rhubarb and Magnesia, should also be taken occasionally. If there is much debility, with griping and flatulency, a tablespoonful of Brandy in a glass of Soda Water will be a good accompaniment to the daily dinner.

Irritation of the Bladder. It sometimes occurs during the latter stages of gonorrhœa that the patient is annoyed by a frequent desire to void his urine; gradually this desire becomes more urgent and continuous, returning as often as every ten or fifteen minutes; there is great pain during the passing of the water, and heat, extending up to the neck of the bladder; if this state of things continues the urine will be tinged with blood, and will deposit bloody mucus; this indicates *ulceration* of the organ, arising from the irritated state of the mucous membrane. The proper *treatment* in this case will be, to keep the bladder in a state of rest by the insertion of a short flexible catheter, retained in its place by a bandage carried between the thighs, through which the urine may escape as it collects. To allay the pain and irritation, Opium in 1 or 2 grain doses should be administered, and a suppository, composed of 5 or 6 grains of the same, introduced into the rectum: the bowels must be kept open by Castor Oil; and a blister applied to the pubes to produce counter irritation, is likely to afford relief. A recumbent position should be maintained, warm hip baths used, and an abstemious diet preserved, avoiding malt liquor and all kinds of stimulants. There is a plain distinction between this form of urinary disease and stone, or calculus, in the circumstance that, whereas with them the pain is most excruciating when the bladder is empty, it is most so with this when it is full. An irritable state of the bladder may be brought on by other causes than that above indicated; such as a too long retention of urine, excessive indulgence in venery, or spirituous liquors, &c.; but in all cases the treatment should be much the same, varied, of course, according to the constitution of the patient, and the exigencies of the particular case. See *Stranguary*, *Stricture.*

Paralysis of the Bladder may be caused by fever; it sometimes occurs in persons of advanced age, as well as in those affected with a paralytic affection: the organ loses its voluntary power to expel the urine, which must be drawn off by means of a catheter; general and uterine stimulants must be administered, especially blisters to the loins, and a pill, composed of 5 grains of Chio Turpentine, and a $\frac{1}{4}$ of a grain of Powdered Cantharides, given twice a day, is a mode of treatment which has been found effective. It has been observed, that the urine, which on the introduction of the catheter to the patient in a horizontal position would not flow, has done so when he has been placed erect; a circumstance attributed to the pressure of the viscera upon the bladder.

Rupture of the Bladder. This sometimes occurs in consequence of external violence; it results in an escape of the urine into the abdomen, leads to violent inflammation, and generally terminates in death.

Bursting of the Bladder may be a consequence of great and protracted distension; perhaps the sloughing of an aneurismal tumour; of course the effect is the same as in that of a rupture, and the *treatment* similar. Little more can be done than to pass a catheter into the bladder and let the urine flow out; keep the patient perfectly quiet, and administering opiates to reduce the pain, with stimulants, such as Brandy, to support the system under the extreme vital depression which invariably follows the occurrence of this accident: only a qualified surgeon can judge of the means to be pursued in this case; and, indeed, in all affections of the bladder the assistance of such should, if possible, be obtained.

Tapping, or Puncture of the Bladder, is a means of relieving the organ when all other means have failed; we need not describe the operation, because it is not one which could under any circumstances be attempted by other than a qualified person: the scientific term for it is *Paracentesis Vesicæ.*

For *Wounds in the Bladder*, see *Wounds;* for *Stone in the Bladder*, see *Calculi.*

Painful and incurable affections of the bladder, in females especially, are often brought on by long retention of the urine from motives of delicacy. In this country there is a great deficiency of public urinals and accommodations of the kind, and the consequences are often very serious. Better attention has been paid to these matters of late, but they are still very far from sufficient for the wants of the community. Women who are travelling often find it extremely difficult to obtain the convenience they require with sufficient privacy, and one cannot wonder that they should, commonly, rather suffer present annoyance and pain, and incur risk of future disease, than outrage their natural modesty and sense of propriety. Frequently in old age, or in an extremely debilitated state of the system, the muscles which compress the bladder become so relaxed that they can no longer force out the fluid, or constrict the passage through which it passes, so as to retain it until the proper time for voiding it arrives; it is, therefore, constantly trickling through the urethra, to the great discomfort and annoyance of the patient, or else it is retained until drawn off by the catheter, an operation which has to be repeated very frequently. If age is the cause of this, little can be done beyond providing the patient with a portable *urinal* of which we shall have to speak when we come to *urine;* if it arise from debility, not the result of lengthened years, strengthening medicines, good diet, cold hip baths, sea bathing, &c. should be resorted to, with stimulating applications to the loins. For *Incontinence*, and *Immoderate flow of Urine.* See *Diabetis, Urine.*

BLAINS or BLEBS. Most medical writers include these under the head of *Vesicular eruptions*, they being large vesicles which make their appearance in the skin: there are three varieties distinguished as, 1st, *Pemphigus*, which chiefly occurs in young children and infants, in close crowded localities; they indicate a weakness of the system resulting from want of proper food, insufficient clothing, &c. The blains, which appear like the scab arising from a burn or scald, are usually on the arms and upper parts of the body, they are not accompanied by much fever nor constitutional derangement of any kind; after a week or so they die away, and fresh crops come out at uncertain intervals. 2nd, *Pompholyx*, attacks children of riper years, and sometimes grown persons of a weakly habit of body, they very much resemble the last in all respects except size, being considerably larger and more numerous. 3rd, *Rupia*, although commonly called vesicular, is more like a pustular eruption; true, it first appears in the form of vesicles containing lymph, but this soon alters its character, and changes into unmistakeable pus, forming an unhealthy ulcer, which keeps extending layer upon layer, until it exactly resembles a limpet shell. When the scabs have risen to a considerable height they usually get rubbed off, but over the raw and inflamed ulcer a fresh crust is speedily formed, which, however, does not attain so regular a shape, and perfect resemblance to the above-named shell as the first. It is by this resemblance that this particular kind of eruption is distinguished from all others. The scabs here are not at all numerous, and they are generally confined to the extremities.

The *treatment* of these three forms of eruptive disease should be much the same; they are evidences of debility, and, therefore, demand a strengthening diet with tonic medicines; change of air, sea bathing, gentle exercise, &c., will greatly assist other remedial means. Attention should be paid to the biliary secretions, and small doses of Mercury given in combination with Rhubarb, if there is any irregularity in them. Citrate of Iron in combination with Quinine, and an aromatic tincture such as that of Cardamums, will make the best mixture; a little alkaline such as Bicarbonate of Soda, or Potash, may perhaps be added with advantage.

Blea-Berry. More generally called Bears' Whortleberry; botanical name *Arbutus*, or *Arctostaphylos Uva Ursi*, a small evergreen shrub of the natural order *Ericaceæ*, whose leaves are powerfully astringent, containing, it is said, as much as 36 per cent. of Tannic Acid. It appears to exert a specific influence on the kidneys, is chiefly given in the later stages of chronic inflammation of the bladder, and has been found useful in cases of irritation of that organ, owing to the presence of *Calculi* (which see). Of the Powder from 1 scruple to 1 drachm may be given every four hours; of the Extract. from 5 to 10 grains at bed time; of the Decoction from 1 to 2 ounces, three times a-day; and of the Syrup from 1 drachm to ½ an ounce. This latter preparation is not a pharmaceutical formula, and is but little known or used. See *Uva Ursi.*

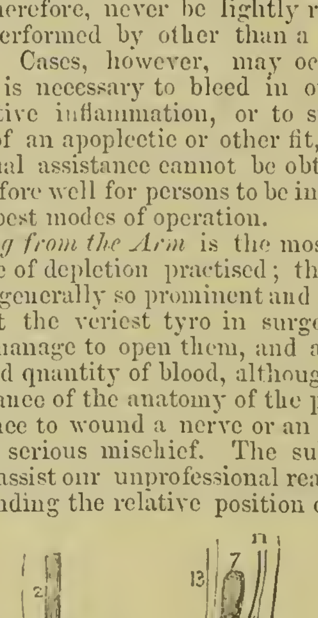
Blear Eye. See *Eye*, *Lippitudo*.

Bleeding.—In the "good old times," when every village had its barber surgeon, one of the most lucrative branches of his profession was bleeding, at one shilling per head, or rather arm, that being the part which was most commonly, as it is now, operated on. Nearly all the pains and aches and unpleasant feelings to which poor human nature is liable, were then attributed to an over quantity, or bad quality, of the blood, and people seemed to consider it a kind of sanatory duty to have a vein opened at least once a year. Phlebotomy was the order of the day, and blood-letting prevailed in the land to an almost alarming extent. In modern practice the lancet is to a great extent laid aside. Dr. Lettsom's motto

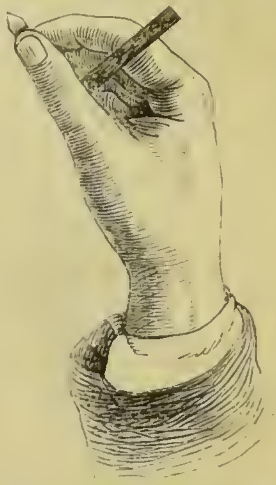
> "I phisics 'em, I bleeds 'em, I sweats 'em,
> And if they *will* die, I let's' em."—(J. Lettsom.)

is not adopted in all its integrity by those who now exercise the healing art, nor are the garments of Esculapians literally "rolled in blood," as they formerly were. Some contend that this free outpouring of the vital fluid was necessary in the former state of the British constitution; the John Bull of our day, they say, is a different being altogether from the sturdy, choleric, full-blooded individual of a century or two ago; and as a proof of this, they advance this fact, that we are not so ready to quarrel and fight as we were: it may be so, although there have recently been symptoms of a return to the old system; but, whether or no, we have only to do with the fact as it stands, and to point out to our readers how the operation of bleeding is to be performed when circumstances render it really necessary. It should always be borne in mind that bleeding is in itself a dangerous operation, putting aside the consideration that the abstraction of so much blood from the system may produce serious mischief; it should, therefore, never be lightly resorted to, nor performed by other than a skilful surgeon. Cases, however, may occur in which it is necessary to bleed in order to arrest active inflammation, or to stay the progress of an apoplectic or other fit, where professional assistance cannot be obtained; it is therefore well for persons to be informed as to the best modes of operation.

Bleeding from the Arm is the most common mode of depletion practised; the veins there are generally so prominent and accessable, that the veriest tyro in surgery can usually manage to open them, and abstract the desired quantity of blood, although from his ignorance of the anatomy of the part, he may chance to wound a nerve or an artery, and so do serious mischief. The subjoined cut will assist our unprofessional readers in understanding the relative position of these organs, and, perhaps, enable them to proceed with some confidence should they be called on to operate with the lancet.



This diagram exhibits the principal veins in the forearm and bend of the elbow: No. 1 is the Radial Vein; 2, the Cephalic; 3, the Anterior Ulnar; 4, the Posterior Ulnar; 5, the Trunk, formed by their union; 6, the Basilic, which at 7 penetrates the deep fascia; 8, point of communication between the deep veins of the forearm and the upper part of the Median; 9, Median Cephalic; 10, Median Basilic; 11, a convexity of the deep fascia, formed by the Brachial Artery; 12, External Cutaneous Nerve, which pierces the deep fascia, and dividing into two branches, passes behind the Median Cephalic Vein; 13, Internal Cutaneous Nerve, dividing into branches, and passing in front of the Median Basilic; 14, Intercosto Humeral Nerve; 15, Spiral Cutaneous Nerve. By this it will be seen that three veins pass up the inner part of the forearm, the middle one, when it has nearly reached the bend, dividing into two branches; it is near this point of division of the Median Vein into Median Basilic and Median Cephalic, that, on account of its greater prominence, the lancet is frequently inserted; but it should be borne in mind, that directly below the upper portion of this lies the Brachial Artery; and that, the Internal and External Cutaneous Nerves send their minute branches close up on either side, those of the former passing before the Median Basilic, and those of the latter behind the Median Cephalic Vein; these considerations should induce great caution, as an *aneurism* might result from puncturing the artery, and *neuralgia*, from a similar accident to either of the nerves. It is the safest plan, if the vein is at all prominent, to open the Median Vein before it divides, or the main channel of the Ulnar; but, in either case, the method of procedure would be this:—Pass a broad piece of tape twice round the arm, about three inches above the elbow, pull it moderately tight, and tie in a bow on the outside; there should have been previously got ready, a small piece of lint, moistened, and folded up into several thicknesses, a porringer or basin, to catch the blood, a broom handle or other stout stick for the patient to grasp, a wet sponge, and a piece of broad tape, about a yard and a half long, also a lancet, which should be perfectly clean and sharp. With the left hand grasp the patient's arm, and straighten it out, to make the veins as tense and prominent as possible; then pressing the thumb of this hand upon the vein at a short distance below the spot where the opening is to be made, and holding the lancet between the finger and thumb of the other hand, as represented in the subjoined cut, and steadying the hand by means of the three disengaged fingers, press the instrument into the vein, and give a slight cut upward in withdrawing it, so as to make an opening sufficiently large for the blood to flow out in a thin stream, which, if the operation is properly performed, it will do steadily, as soon as the pressure of the thumb upon the vein is withdrawn, and perhaps before. From twelve to sixteen ounces is the quantity of blood usually abstracted; it should be ascertained beforehand how much the basin or porringer will hold. When it is sufficiently full, again pressing the thumb on the vein just below the opening, loosen the bandage above the elbow, sponge off any blood there may be about the cut, bring the edges together, and place over it the folded piece of lint previously prepared, press the thumb upon that, and then proceed to bandage thus: lay the tape obliquely across the wound, pass it round the arm above the elbow, and bring it back again over the same spot, then let it go round the arm below the elbow, and returning, let the two ends be tied in a secure bow, in the bend of the arm, with the free movement of which the bandage should not be tight enough to interfere, although it must be sufficiently so to retain its position. This mode of bandaging is called the figure of 8, from its resemblance to that figure; the following cut will probably make our explanation clearer. A skilful operator will make a sufficiently large and clean opening for his purpose, yet not always will the blood flow freely; should it not, direct the patient to take hold of the stick before-mentioned, and by alternately tightening and loosening his grasp, he will give an impetus to the flow of blood, and so facilitate the completion of the operation,



which is more effective if performed quickly. The bandaging can be performed more readily if the patient's arm is kept partly extended, resting upon the bleeding-stick; when the bandage is properly tied, the arm can return to its natural position, and in about twenty-four hours may be relieved of all pressure; until the expiration of this period it should be kept quiet, but should any extra exertion cause the slipping of the bandage, and the blood burst forth afresh, it may be easily stopped by pressure, applied as above directed. During the flowing of the blood, both the countenance and the pulse of the patient should be carefully watched, and should the former become pallid, and the latter diminish in force and frequency, it will be necessary to complete the operation. If faintness is complained of, this must be done at once, and a recumbent position should be assumed.

Bleeding from the veins of the leg and the neck is sometimes practised, but only the skilful surgeon would think of attempting this; the latter part is only operated on in young children, in whom the veins of the arm are hidden in fat; it is, however, a difficult operation, and attended with considerable risk, and the object, moreover, can generally be attained by means of *Leeches* (which see), also *Cupping*, and *Scarification*, all modes of what is called *topical* blood letting; that is, the abstraction of blood with the view to diminish the quantity in some particular part, which may be the seat of disease; whereas *general* blood letting is resorted to with a view to diminish the whole mass of the circulation, and to deplete, or reduce the system. The opening of a vein for this purpose is termed *Phlebotomy*, or *Venesection;* the opening of an artery, sometimes resorted to in *Apoplexy* (which see), is termed *Arteriotomy* (which see).

The *accidents* likely to result from bleeding are, 1. The formation of a small tumour round the orifice, occasioned by the blood insinuating itself into the cellular tissue while it is flowing out of the vessel; it forms very rapidly, and sometimes impedes the abstraction of the blood; a change in the posture of the arm will frequently prevent its enlargement, and a removal of the bandage will generally do so. Should a sufficient quantity of blood not have been taken, another vein in the same, or the opposite arm may be opened. See *Ecchymosis* and *Thrombus.* 2. Inflammation of the Integuments and suppuration of the Cellular Tissue in which the vein lies. This is sometimes caused by a bad lancet, which does not make a clean cut, but rather lacerates; and it will be especially likely to ensue if there be great irritability of constitution; unsteadiness of the arm during the operation, or want of care in bringing the edges of the wound properly together, will also tend to produce this. *Treatment.* Keep the arm at rest in a sling, apply Sugar of Lead lotion, give mild saline aperients, and if suppuration ensues poultice with Bread and Water. 3. Inflammation of the Absorbents; often occasioned by motion of the arm soon after bleeding; indicated by swellings over the course of the larger vessels, with pains shooting from the point of venesection up and down the arm; there is much inflammation at the opening of the vein, and finally, suppuration. *Treatment.* Same as above, with the free application of the lancet to the wound, should it assume the character of an abscess. 4. Inflammation of the Vein. This is likely to arise when the edges of the wound made by the lancet do not readily unite; it may vary greatly in degree, extent, and progress, and the treatment, although in the main similar to that above recommended, will accord with the peculiar circumstances of the case. Care should be taken to prevent the inflammation from extending along the membraneous lines of the vessel to the heart, by placing a compress over the vein a little above the puncture.

5. Inflammation of the Fascia of the Fore Arm, a consequence of an inflamed state of the vein where punctured; the whole arm becomes stiff and painful, the joints cannot be moved, nor the fingers extended, without much suffering; the en-

largements are sometimes affected with a kind of erysipelas; there is swelling of the arm, and a considerable degree of fever in the system. In about a week, a superficial formation of matter takes place, for which a way of escape should be made; it will probably form again and require a second, and perhaps a third, opening, but eventually is quite got rid of, and the patient gradually recovers the use of his arm. The *treatment* the same as usual in inflammatory diseases; in the latter stages, friction for the fingers, elbow joint, and fore arm, with Camphorated Mercurial Linament; and, if necessary, extension by means of a splint.

6. Wounded Nerves. This is known by a sensation of acute pain in the parts which the particular nerve supplies, such as is felt in Tic Doloreux, and other neuralgic complaints; in some instances violent convulsions have ensued, and other symptoms attributable to nervous irritation. If anodynes do not succeed in allaying this, a complete severance of the injured nerve is recommended; and this, of course, only a surgeon would attempt.

BLEEDING AT THE NOSE. Persons of a sanguine temperament, and full habit of body, are most subject to this disease, we were about to say; but perhaps it ought rather to be regarded as a salutary provision for the relief of the overcharged system. If it does not run to a weakening extent it is very questionable whether it should be interfered with. Those who are troubled with vertigo and headache, arising from a fulness of the veins and a tendency of blood to the head, know how much better and lighter they feel after a good bleeding from the nose; and there can be no doubt that many a fit of apoplexy has been averted by it, and many an attack of inflammatory fever, or inflammation of the brain. This bleeding may arise from several causes, among which may be named violent exercise, great heat, blows on the part, the long maintenance of a stooping posture, and a peculiar smallness of the vessels which convey the blood to the brain, rendering them liable to rupture; it may come on without any previous warning, or be preceded by headache and a sense of heaviness, singing noises in the ear, heat and itching of the nostrils, throbbing of the temporal artery, and accelerated pulse. When it comes on too frequently and continues long, so as to cause faintness, and especially if the person subject to it be of a weakly habit or advanced in years, it should be stopped as soon as possible. The stoppage may sometimes be effected by immersing the head in cold water, free exposure to cool air, and drinking cool acidulous liquids; the body of the patient should maintain an erect position, with the head thrown somewhat back, a key or other cold substance be applied to the spinal cord, vinegar be snuffed up the nostrils, or an astringent wash injected with a syringe; it may be composed as follows:—Alum and Acetic Acid of each 2 drachms, Water 6 ounces; or 3 drachms of the Muriated Tincture of Iron in the same quantity of Water; or if these fail, the nostrils may be plugged with lint dipped in a strong solution of the Sulphate of Copper; or the lint first moistened, and then dipped in finely powdered Charcoal. When the bleeding has stopped there should be no haste to remove the clotted blood from the nostrils; let it come away of itself; do not blow the nose violently, nor take stimulants, unless there be excessive faintness, in which case a little cold Brandy and Water may be taken. Where there is a full habit of body, cooling medicines, low diet, and leeches to the temples, may be safely advised, with perhaps occasional bleeding from the arm. See *Hæmorrhage.*

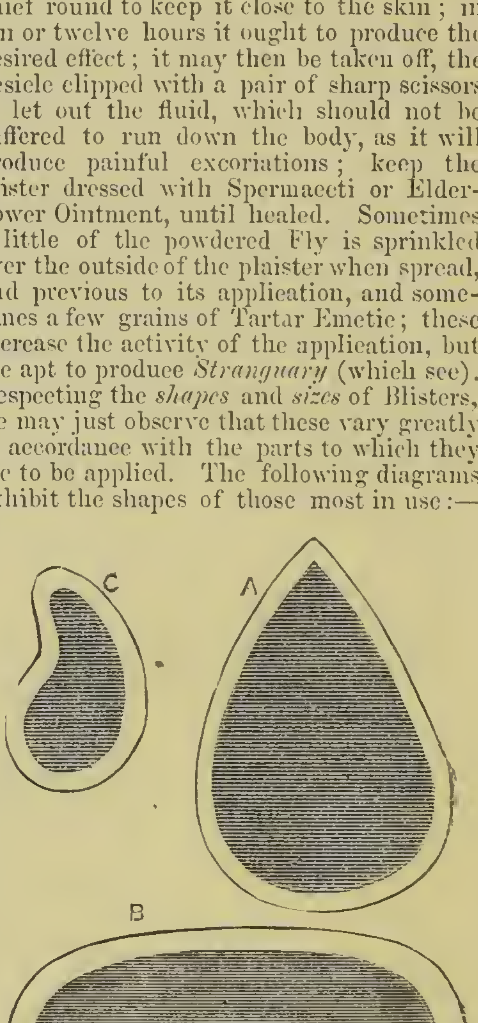
BLEPHARIN (Greek, for the Eyelid). Hence the compounds—*Blephar-Opthalmia*, Inflammation of the Eyelid; *B.-ptosis*, a falling of the upper Eyelid; *Anklyo-blepharon*, an unnatural union of the two Eyelids; *Pachy-blepharosis*, a thickened state of the Eyelids; *Sym-blepharin*, the connection of the lid to the globe of the Eye.

BLIGHT, a kind of palsy affecting one side of the face, the nerves of which lose their power; it is caused by sudden cold or damp. See *Palsy.*

BLINDNESS. Deprivation of sight may proceed from various causes, such as one of the diseases which affect the eyeball, (see *Ophthalmia*,) or deficiency of power in the optic nerve, local or general paralysis, or any disease whose seat is in the brain or the nervous system; the formation of a speck on the eye, or of a film over the lens. (See *Amaurosis*, *Cataract.*) Sometimes the affection of the brain or nerves, from which loss of sight proceeds, is sympathetic, arising from a disordered stomach; in this case, as in many others, it is but transient; and matters may be set right by a Blue Pill and Senna Draught, with low diet, and avoidance of the exciting causes of the disorder. If these do not have the desired effect, a surgeon should be consulted, as there is reason to suspect some organic mischief. Leeches on the temples, blisters behind the ears, cupping in the neck; either, or all of these may be tried should there be a sense of fulness, headache, or giddiness accompanying indistinctness of vision; in this case, too, more powerful medicines, such as Colocynth and Calomel Pills, should be taken, and a course of depletion vigorously carried out.

Proceeding, as blindness does, from such a variety of causes, few general directions can be given for its treatment: when it is owing to a change in the structure of the eye itself, its approaches will be very gradual, unless this change is the result of active inflammation. Temporary loss of sight is a frequent symptom of *Apoplexy* (which see). It also results from diseases of exhaustion, and sometimes occurs after copious bleeding; its total loss may be effected by a blow on or about the region of the *Eye* (which see). For the blind from birth there is no hope of recovery. See *Sight*.

Blisters (Latin *vesicatoria*, from *vesica*, a bladder, sometimes called *Epispastics*, which see). A Blister is an application to the skin, producing a discharge of the thin watery matter called *Serum*, or of thicker matter called *Pus* (both of which see), by exciting acute inflammation. The chief blistering agent used by medical practitioners in this country is the Spanish Fly, of which an account will be found under the head of *Cantharides*. But the application of any highly-irritating substance will produce the same effect, which is in truth an effort of nature to protect the acutely sensible true skin from the action of the irritant, by interposing between it and the outer skin, or scarf, a bag or vesicle of fluid; thus we see, that after scalds and burns, bladders of serum arise. Steam, strong Ammonia, Mustard, Horseradish, Croton Oil, Tartar Emetic, and many other applications, will excite this inflammatory action, and cause the formation of a blister, but scarcely any so speedily and effectually as the agent first named, which is generally applied in the form of a plaister—the *Emplastrum Cantharides*, or *Lyttæ*, of the Pharmacopœia—although this comparatively clumsy and inconvenient mode of application is now being rapidly superseded by one more light and elegant, and cleanly, called *Cantharidine*, or *Blistering Tissues*, which is silk, or some other convenient material saturated with the active principle of the Fly, obtained by distillation in Ether. This has only to be cut to the requisite size, placed on the part, and kept close to it for a few hours; it may be obtained of any druggist. There is also an Extract prepared by evaporating a tincture composed of 4 parts of the Flies to 1 of strong Acetic Acid and 16 of Rectified Spirits; and *Acetum Lyttæ*, formed of the above acid and the insects. The latter preparation has merely to be applied with a camel-hair brush; it is very speedy in its operation. The old and still generally-pursued method is to spread the Blister Plaister pretty thickly on leather, adhesive plaister, calico, or linen, and place it on the part affected, putting a handkerchief round to keep it close to the skin; in ten or twelve hours it ought to produce the desired effect; it may then be taken off, the vesicle clipped with a pair of sharp scissors to let out the fluid, which should not be suffered to run down the body, as it will produce painful excoriations; keep the blister dressed with Spermaceti or Elder-flower Ointment, until healed. Sometimes a little of the powdered Fly is sprinkled over the outside of the plaister when spread, and previous to its application, and sometimes a few grains of Tartar Emetic; these increase the activity of the application, but are apt to produce *Strangury* (which see). Respecting the *shapes* and *sizes* of Blisters, we may just observe that these vary greatly in accordance with the parts to which they are to be applied. The following diagrams exhibit the shapes of those most in use:—



A, for the chest, pointed end upwards, size 7 inches long by 5½ at broadest part; B, for the side or loins, 8 inches long by 4 broad; C, behind the ear, 4 inches long by 2½ at broadest part; this includes the margin, which should be left plain, or spread with resin or some other adhesive plaister, that is, when the old Blister Plaister is used. For children, the same shapes are used, but reduced in size according to age and other circumstances. Sometimes very much larger blisters than these are applied, and of different shapes, adapted for particular parts of the body; but this is under the immediate direction of the medical attendant. The best time for the application of a blister is the evening, and as soon as it is on, the patient had better retire to bed, and if possible get to sleep. If at the end of twelve hours it is found not to have risen well, it must remain on longer. With persons far advanced in life, or who have a particularly dry skin, or are in a state of great nervous depression, sixteen, or even twenty hours may be required for the full effect of the irritant to be produced. The action may be assisted, and the removal of the plaister facilitated, by rubbing the part previously to application with Olive Oil, or by interposing a thin piece of muslin between the plaister and the skin; this, of course, refers to the old form of application. For children, and those who have tender and delicate skins, the action of a blister should be carefully watched, as the effect is often produced in a shorter time than is usually required. The plaister should be removed as soon as it begins to rise, and a warm bread poultice applied; under its influence the full rising will generally take place. When the vesicle is punctured, and the fluid emptied upon a cloth placed to catch it, allow the membrane to subside and apply the dressing; it is sometimes erroneously imagined that the rising has only taken place at one part of the vesicated surface, because a bladder only appears there; but a close examination will show that the bladder extends over the whole, but is only obvious at the lower portion, where the fluid has gravitated; sometimes, instead of one large bag, there are several small vesicles—these should all be clipped, unless very small. When, instead of watery fluid, the blister contains a thick pus, which does not flow out, there should be no squeezing to make it do so; it will gradually ooze out into the dressing, which may be Ointment spread upon Lint, as before mentioned, or Cotton-wadding, which has been recently employed with good results. But perhaps the most effective, as it is undoubtedly the most pleasant and elegant, is that called Brown's Tissue Dressing, which consists of a cerate evenly and thinly spread upon tissue paper; this adheres closely upon the vesicated surface, and forms as it were a second cuticle.

Sometimes a blister is popularly said to "get the fire into it," that is, it becomes hot and inflamed; in this case a cold bread-and-water poultice will generally give relief.

The custom of keeping blisters open by repeated applications of Savine Ointment, or some other irritant, although followed by many medical practitioners, is scarcely to be recommended. By its irritating effect upon the nervous system it frequently does much harm. The counter-irritation may be kept up by a succession of small blisters close about the same spot.

"Flying Blisters" are those which are taken off as soon as redness is produced: weak mustard poultices will answer this purpose. The non-rising of a blister frequently gives much alarm, it being a popular impression that the absence of susceptibility of the skin is owing to a deficiency of vital power; but very trivial causes will sometimes prevent the expected effect taking place.

Persons liable to affections of the Kidney should never be blistered, except with medical sanction. Much harm is often done by resorting too hastily to this method of obtaining relief in cases of fever and acute inflammation; by the irritation produced, the general symptoms are aggravated, without affording the expected amount of local relief. It is always best to consult a surgeon before making the application.

By all this it will be seen that blisters are chiefly useful as counter-irritants. They are applied over the seat of some active disease, as *Pneumonia*, *Gastritis*, *Hepatitis*, *Phrenitis*. They are also applied with good effect in spasmodic affections, as *Angina pectoris*, *Epilepsy*, *Catalepsy*, *Hysteria*, *Paralysis*, &c. (all of which see).

Blood (Latin *sanguis*). The fluid which circulates through the heart, arteries, liver, veins, &c., and is the source of animal heat, and the great active agent of vitality. It is obtained from the food by the processes of *Digestion* and *Assimilation* (which see), and its fitness for the purposes intended depends greatly upon the nature and quality of that food; it is therefore of importance that we should understand something of its component parts, and of the particular substances which are best adapted to impart to it the requisite conditions. Chemical analysis and the powers of the microscope have both been applied to an examination of this vital fluid, which consists of the *Liquor Sanguinis*, or Liquid of the Blood, which is transparent and nearly colourless, and holds in solution the fibrin, albumen, and mineral salts, which constitute its animal principles; in this float the corpuscules, or globules, which are of two kinds, the red, which are much the more numerous, and the white, or colourless; it is the former which impart that sanguine tint which distinguishes the blood of most animals. These red globules are extremely minute, their average diameter being, it is said, about the 3,200th part of an inch; they consist of a membrane enclosing a coloured fluid, and under the microscope look like flattened discs with a depression in the centre; it has been observed that when drawn from the body they have a tendency to arrange themselves in rows. A different condition of the blood is known to exist during the time it is circulating in the system, and after it has issued from the vein or artery. Many of our readers may have noticed that a separation takes place, part becoming a thick solid mass, and part a thin almost colourless fluid, the former of these, which is called *clot*, is composed of a fibrous network involving the corpuscules, whilst the latter, termed *Serum*, is the *Liquor Sanguinis*, deprived of its fibrin, which has united with the thicker portion. By the relative proportions of these constituents, and their forms and appearances, the experienced eye can at once tell the condition of the body from whence they have been withdrawn. Thus, when the solid matter assumes a cup-like shape, and is covered with a buff-coloured fluid, active inflammation is indicated. It has been estimated that the proportion of solid matter in 1,000 parts of healthy blood is from 200 to 210, as follows: Albumen, 20; Corpuscules, red and white, 125; Fibrin, 2½; Chloride of Sodium and Potassium, 4; Phosphates of Soda, Lime, Magnesia, and Iron, Sulphate of Soda, and Oxide of Iron, 2½=204. Of these constituents we may briefly observe, that the *Albumen* is the material from which are elaborated most of the substances necessary to existence, the fibrin itself and the solid parts of the corpuscules included (see *Albumen*). The *red globules* appear to be chiefly useful in stimulating the muscular and nervous systems to a proper performance of their respective duties; their office is more connected with respiration than nutrition. To the *Fibrin* has been assigned the formation of the muscular and other fibrous tissues; this is the material which is most completely prepared for organisation, between it and albumen there is little apparent difference, and even by chemical analysis it is difficult, some say impossible, to detect any. The only obvious distinction appears to be that, whereas the fibrin coagulates as soon as it is removed from the body, the albumen will only do so in a temperature of 150 degrees; it is a curious circumstance that in cases of death by lightning, or any active poison, this power of coagulation is lost; this would seem to indicate some chemical change affecting the vitality of the fluid. The *phosphates* and other *saline* constituents supply the materials for building up and repairing the bony frame and the several tissues; they also enter largely into the secretions, and serve the purpose of preventing the decomposition which would take place in the blood but for their presence.

By this combination of elements, nutrition is supplied to the various parts of the system, of precisely the kind that is required; fibrin for the muscles; fatty matter, phosphorus and albumen for the nerves; gelatine and earthy salts for the bones, and so on. Again, as to the secretions, the bile absorbs fatty matter and some other elements peculiar to it; urea and some of the salines enter into the urine; and to the composition of the milk in women go fat, sugar, albumen, &c. The abstraction of all these elements from the blood, in its course from the heart through the arteries, alters its composition, and renders it unfit for the purposes of life; it loses its bright red colour, and becomes dark and thick, laden with carbon, and in this state is conveyed through the veins to the lungs, where it gives out its carbonic acid, and takes in a fresh supply of oxygen, in the acts of inspiration and respiration, is passed on to the great reservoir, the heart, with all its vital properties restored, and is again pumped out through the arteries, to run the same course of usefulness, and return again, and again to receive a fresh commission from the "great monarch of the 'purple island,'" as the old poet Fletcher, has fancifully termed the human body. This beautiful arrangement must strike every one with admiration, who attentively considers it; it has been well said that "an undevout astronomer is mad;" no less truly might this be said of an undevout anatomist, for he has constantly before him the most wonderful adaptations, and proofs of divine power and goodness.

It will be seen by the above that, although in the process of depuration, that is, purifying or cleansing, which the blood undergoes, the liver, kidneys, skin, and mucous membrane, generally take an active part, yet the chief organs employed are the *Lungs* (which see).

With regard to the *Pathology of the*

Blood, we may briefly remark that in various diseases it presents aspects and combinations very different from those of a healthy state; thus in plethora, we find an increase in quantity; after hæmorrhage, or bleeding, of course a decrease; in severe inflammation and inflammatory fevers, the temperature which may generally be set at about 100°, rises to 120° or even 150°; in languid states of the system it falls considerably below the average; in states where the circulation is rapid it becomes redder than common from an excess of globules; pale from a deficiency of the same, in *Anæmia* (which see); and purple from defective oxygenisation in pneumonia, phthisis, pregnancy, and acute rheumatism. In uninflammatory fevers, cerebral congestion, scurvy, and inflammation of mucous membrane, the quantity is diminished, as is that of albumen in the serum in Bright's disease of the kidney, and of the salts in typhoid fevers and cholera. The blood, also, may be considerably changed in its character by the admixture of elements not natural to it, such as those of the different secretions or substances not contained in any of them, as sugar. The blood may, also, absorb its own morbid secretions; by it all contagious diseases are taken into the system, as are also poisons, such as alcohol, opium, lead, mercury, iodine, or arsenious acid (see *Poisons*), and thus it is often materially altered in its constitution, and rendered unfit for circulation.

It has been estimated that about 28 pounds is the average *quantity of blood* circulating through the system of a healthy adult: the principal states of disease incidental to this fluid are *Congestion*, caused by an increased quantity of blood in any organ, by the obstruction of any passage, the breaking away of cellular tissue, or the dilation or rupture of internal passages; cold applied to the surface of the body, or a dry state of the skin, will sometimes occasion this; if affecting the vessels of the brain, it is called *Extravasation* (which see).

Inflammation of the Blood may proceed from several causes: it consists of a dilated state of the small arteries and capillaries, into which, owing to increased action of the heart, more of the fluid is forced than in their natural state they will contain. See *Inflammation*.

Vomiting and Spitting of Blood. The first of these indicates a deranged state of the system; it may proceed from indigestion producing a plethoric state of the blood vessels of the stomach, the interruption or suppression of discharges, or a diseased state of the blood, as in *Purpura* and *Scurvy* (which see); great exertions after a full meal, or external violence, may also give rise to this, or the passing of blood through the bowels, which may sometimes go on for some time without being discovered. The rupture of a vessel in the lungs may likewise occasion vomiting of blood, but this, called by surgeons, *Hæmoptysis* (which see), is generally attended with a cough, and the red fluid is spat up in a succession of mouthfuls; whereas if it comes from the stomach it is thrown up in one full vomiting, and is usually mixed with food. The *treatment* for this should be cold drinks, perfect rest, active purgatives; 3 grains of Calomel, or 5 of Blue Pill over-night, and a Senna draught in the morning to begin with; the purgatives should be repeated daily until the stools lose their dark colour, and, should the bleeding continue, give Spirits of Turpentine, about 20 drops, in cold water, every four hours, with a dessert-spoonful of Vinegar in water, or a draught containing 20 grains of Gallic Acid and 10 of Laudanum in a little Mucilage. Keep the patient low in diet until the bleeding has stopped, and then raise it, giving, also, light tonics and gentle aperients, if required.

If the bleeding is occasioned by *Amenorrhœa*, or *Piles*, treat as directed under those heads. For *Determination of Blood to the Head*, see *Apoplexy*, *Brain*, *Congestion*; for *Bloody Flux*, see *Dysentery*; for *Chronic Diseases of the Blood*, see *Anæmia*, *Cachexia*, *Chlorosis*, *Plethora*, *Scrofula*. For *Blood-shot Eyes*, see *Eye*, *Inflammation*.

BLOODSTONE. Greek *Heliotropum*, a species of chalcedony, sometimes put down the back to stop bleeding of the nose; its coldness is its only virtue.

BLOWS. These are most frequently fatal when inflicted on parts immediately over a collection of nerves, as the region of the heart, the pit of the stomach, or the neck. A blow on the head may cause concussion of the brain, if it do not fracture the skull, which it may do if inflicted on the side of the temple where the bone is thin; one on the spine may fracture the vertebræ and cause paralysis of the lower part of the body, which may indeed occur without a fracture, but by reason of the shock sustained by the nervous system in its main channel of sensation. A deadly faintness generally follows the infliction of a blow which is likely to result seriously; for this, stimulants, such as Brandy, Ammonia, or Ether should be given; cold water dashed on the spine should also be tried, and should this prove unsuccessful, and syncope ensue, a warm bed and artificial respiration must be tried, with hot flannels to the chest, Mustard plaisters to the spine, and Turpentine or other stimulant injections. See *Bruises*, *Contusions*.

BLUE DISEASE. Characterized by the blue or livid appearance of those parts which, in health, are generally red, and by langour and great susceptibility to cold. *Cause*—Some malformation of the heart, which prevents the proper arterialization of the blood in the lungs. This disease dates from birth, and the patient seldom survives infancy. Little or nothing can be done remedially.

BLUE EYE WATER. A solution of Ammoniated Copper, the *Liquor Cupri Ammoniati* of the London Pharmacopœia. See *Eye*, *Copper*.

BLUE OINTMENT. Mercurial Ointment, of a blue or gray colour: officinal name *Unguentum Hydrargyri*. See *Mercury*, *Ointments*.

BLUE PILL or Mercurial Pill. *Pilulæ Hydrargyri*. See *Mercury*, *Pills*.

BLUE STONE. Blue Vitriol or Sulphate of Copper, *Cupri Sulphas*. See *Copper*.

BOILING. The "Family Doctor," it will be seen, sometimes takes upon himself to give advice in matters of domestic economy when they affect the important subjects of health and disease, and he would caution the cook never to let the water in which she puts her meat on the fire reach the point of ebullition—that is, about 212° Fahrenheit. That great authority, Liebig, says that 50° or 60° lower than this is quite sufficient to cook the meat, provided a sufficient time be given, and that, in this way, it will be more tender and easy of digestion, and consequently more nutritious, than if absolutely boiled—indeed, stewed would be the proper term for this method of cooking. The water, it is true, may and should boil before the meat is put into it, and for a minute or two after; but then sufficient cold water must be put in to reduce the temperature to about 150°, and at this point it must be kept until the cooking is effected, that is, until it exhibits no appearance of redness anywhere. "By the sudden immersion of the flesh in boiling water," says our authority, "the external constituents, and especially the albumen, becomes quickly hardened and coagulated, so as to form a case around the interior portions. If the high temperature is preserved, this hardening process will be carried right through the joint, which is thus rendered indigestible, whereas in the lower temperature the meat is cooked without the destruction of its nutritive soluble principles. If soup is the object of the boiling, then the meat should be put into cold water, and the temperature gradually raised to the boiling point, or near it; in this way the dissolving process goes on regularly through the whole mass, there being no case-hardening to interfere with it." N.B.—All vegetables should be thoroughly boiled; they will be likely to disagree if they are not.

BOILS. These painful inflammatory swellings mostly occur in young and vigorous persons, so much so indeed as to be generally looked upon as a sign of robust health. Now and then, however, we find them breaking out upon the weak and delicate; in any case they are symptomatic of some derangement of the system, which takes this means of relieving itself of that which is superfluous, or dangerous to its internal economy. They should be regarded as warnings that some change in the diet or mode of life is necessary to the preservation of complete health; those who neglect such warnings often suffer the consequence in an attack of severe illness, or in an eruption of a more painful and dangerous kind. See *Carbuncle*.

The seat of the boil is the true skin and the subjacent cellular membrane. A small angry-looking spot on the outer skin first appears; this gradually enlarges into a swelling with a whitish conical centre, surrounded by a hard inflamed base; sooner or later this is sure to suppurate and discharge pus and blood, and a fibrous mass called a core; until this latter is ejected the abscess will not heal; it often lies deep, and causes great pain before coming away. Warm-water bathing, and poulticing with Linseed meal, is the proper treatment at first; Resin Ointment, or Venice Turpentine, or some other drawing application of an irritating nature, is often applied, but it causes unnecessary pain, and effects no object that the poultice would not. As soon as the prominent part of the swelling becomes soft, a cut should be made with a knife or lancet through the skin beneath which the core lies; this permits the escape of the confined matter, and relieves the pain. The poultices should be continued until the core is drawn out, soon after which the healing process will commence; this may be facilitated by a dressing of simple ointment, or pure hog's lard will do.

Boils and Carbuncles have recently been successfully treated with Opium, of the aqueous extract of which a thick solution has been painted on any suspicious spot;

this forms a coating which must be renewed three or four times a day: twenty-four hours' application is said to be generally sufficient to arrest the spread of the inflammation. A plaister composed of equal parts of Soap, Opium, and Mercury, spread on thick leather, is then placed on the spot, having a hole in the centre for the escape of any matter; if painful, a poultice must be applied. If, in spite of this treatment, the boil will have its course, strong Nitric Acid is said to be the best application, using it freely two or three times, taking care to remove the slough before each application, supporting the margin with plaister and poulticing freely. The beneficial effects of the opium is said to depend upon the soothing influence which it exerts upon the capillaries, small arteries, and nerves; its immediate effect is to lessen the throbbing, heat, and redness. The use of the plaister is to give support to the inflamed vessels, and to protect the surface from the atmosphere.

Boils often follow each other in rapid succession; they are very painful and troublesome, but not in themselves dangerous; they seldom run into ulcerations and deep seated sloughing sores unless neglected; persons who are obliged to go about their daily avocations with them will do well to apply, during the day, a piece of lint saturated with Olive Oil, and kept on with strapping. For internal treatment, those of a full habit should take 3 or 4 grains of Blue Pill two or three times a week, with a Senna Draught each morning after; they should also be abstemious in their diet, and avoid stimulants. Delicate persons should take a Compound Rhubarb Pill every alternate night, or a draught composed of Rhubarb and Magnesia, 10 grains of each in Cinnamon Water; these should have generous diet. Decoction of Sarsaparilla, ½ a tumbler full twice a day, and tepid baths may be of service to such. See *Furunculus.*

BOLETUS. A genus of the Mushroom tribe of plants belonging to the order *Fungi*, (which see). Two of its species are *B. Ignarius*, a parasitical fungus found most commonly on the oak; it is applied to wounds as a *Styptic; B. Pseudo Ignarius*, from which is obtained *Boletic Acid.*

BOLOGNA STONE. A phosphoric stone found at Bologna; it is the native sulphate of *Baryta* (which see).

BOLUS. This is a large soft kind of pill which modern medical practice has pretty generally agreed to discard from its list of formula, although the old physicians were fond of ordering it; it might be composed of any of the ingredients used for pills, but is a disagreeable and inconvenient mode of administration.

BOMBOS (Greek, for the humming of the Bee). A dull intermitting sound in the ears, like beating or buzzing. See *Ear.*

BONE. This is the substance of which the frame-work of the animal body is composed, to which are attached the softer portions which it alike protects and supports; it is hard and firm, and, therefore, well adapted for these purposes, and also for affording leverage for the action of the muscles. Bone is a highly organized and complex substance, it consists of animal and earthy, and saline materials, in the proportion of about one-third of the former to two-thirds of the latter, or to speak more strictly, according to chemical analysis, we may say that in 100·00 parts there are 33·30 of cartilage and blood vessels, 51·04 phosphate of lime, 11·30 carbonate of lime, 2·00 fluate of lime, 2·36 magnesia and soda.

In the human frame there are 252 bones, they are of various forms and degrees of density or hardness; thus in the limbs, they are hollow cylinders, combining lightness with strength; in the body and head they are chiefly flattened and arched, forming cases for the internal viscera; in the spine and extremities, they are in many pieces, to facilitate the bending of the numerous joints; their connections with each other are accomplished and preserved in many ways. See *Joints*, *Muscles*, *Sutures.* In all bones, whether hollow or solid, the outer portion is harder than the inner; many of them are spongy, or as it is scientifically termed, *cancellated*, most of them have minute irregular cells scattered through their texture; they are covered by a thin fibrous membrane called the *periosteum*, or, on the head, *pericranium*; inside the skull, this covering is termed *dura mater* (which see). At those extremities, where a smooth and elastic substance is required for the joints, most bones have a covering of *cartilage*, (which see). Bones are first developed in a gelatinous form, which hardens into cartilage, and then receives the deposit of lime, by which they are rendered firm; sometimes there is a deficiency of the earthy deposit, and thus the bones are bent and yielding (see *Rickets*). When there is too much lime the bones are too brittle and easily broken. For further particulars respecting bones, see *Osteology*, *Teeth*, *Skeleton.* One of the principal *diseases* to which the bones are subject, is *Caries* (which see); it acts on the periosteum like ulceration on the soft parts of the body.

Another disease of the bones is *Necrosis* (which see) it is, as its name implies, actual death of the osseous substance. Both these diseases are characterised by a constant gnawing pain in the bone, swelling and redness over the seat of the disease ensues; there is a formation of matter and a discharge of a foul fœtid character communicating a dark stain to the dressings. Several openings in the skin may occur along the course of the diseased bone, of which occasionally small pieces may come away with the discharge. No time should be lost in seeking medical advice when there is reason to suspect the existence of either of these diseases, as irremediable mischief may result from a neglect of them; although not immediately dangerous, they are likely to prove eventually fatal, wearing the patient out by constant irritation, and the strain upon the system, by which the constitution is irretrievably ruined, and the chances are that the patient goes limping through life a miserable cripple.

A frequent and desirable termination of ulceration, or caries of the bone is *Anchylosis* (which see). Many minute blood vessels pass into and through the porous tissues of the bones, and hence they are liable to *inflammation* and *congestion*, both acute and chronic, resulting in softening, and ulceration or mortification, passing thus into *caries* and *necrosis*. That which is commonly called a *White Swelling* (see *Knee*) is a result of chronic inflammation, it ends in caries of the spongy texture of the ends of the bone, and destruction of their cartilaginous lining; *Abscess of bone*, sometimes results from inflammation, and especially after acute disease, such as *Small Pox* (which see), a prominent symptom is a fixed pain in one spot in addition to inflammatory enlargement.

Exfoliation is the death of the outer bony layer only; it is generally caused by some injury to the bone from a blow or a graze, or the amputating knife; in this case the shell dies, and is replaced by fresh osseous matter coming up from beneath by granulations pushing the dead bone from its place in thin flakes or exfoliations. (See *Fractures*, *Scrofula*).

The fact that, the gelatinous portion of bone is capable of extraction by boiling, has been turned to an economical account, in the making of soups and other nourishing compounds, and also in various branches of the fine arts. (See *Gelatine*.) Those who have the care of providing for families should bear this fact in mind, and allow no liquor to be thrown away in which bones have been boiled, nor any bones of roast joints as they contain nutrition. A cheap, and economical apparatus, called *Papin's Digester*, has recently been introduced, which greatly facilitates the extraction of the animal matter from bones, this it does so completely that, on being taken out they fall to pieces, having little beyond the earthy constituents left; the amount of nourishment thus extracted is very considerable, and if not used in the house, may well be made the foundation of soup for distribution amongst the poor of the neighbourhood. Bones are also useful to grind as manure, for which their earthy and animal constituents well adapt them; so nothing need be wasted nor lost, the bone which has served its purposes in the human, or some other animal frame, contributes to the production of fresh bone, and decay goes hand in hand with renovation.

BORAGE. The *Borago Officinalis* of botanists; a plant of the natural order *Boraginæ*, found in this country, chiefly in chalky places; originally a native of Aleppo, but now naturalised in most countries of Europe. It possesses demulcent properties, and was formerly much used for making cooling drinks, having in its tissues a small quantity of Nitrate of Potash.

BORAX. This substance is the Biborate of Soda (*sodæ biboras*). It is diuretic, antilithic, and emmenagogue, but is now seldom given internally; when it is so, the dose is from 5 to 30 grains. It was formerly prescribed as a sedative under the name of Boracic Acid. It is chiefly used now locally as a detergent, and more especially in aphthrous affections. It has been recommended, dissolved in Elder flower or

Rose water, as a wash for the face, to remove freckles and tan; the proportion being about 1 drachm to 6 ounces; also, as a lotion for gangrenous buboes; is said to be good for ringworm, dissolved in Acetic Acid; and in the later stages of opthalmia in Laurel Water and Mucilage; and mixed with Elder Ointment, for broken chilblains. The *Mel boracis* (Honey of Borax) of the Pharmacopœias is made by mixing 1 drachm of borax with 1 ounce of honey; this is the usual form of application in *Thrush* (which see).

Bothriocephalus Latus (Greek, *bothrion*, a pit, and *kephale*, the head). The broad tapeworm, called *Tœnia lata*, found in the intestines. See *Vermes*.

Bougie. A surgical instrument, used for dilating the œsophagus, rectum, urethra, &c.; it may be of wax, or some pliable composition, or soft metal. The elastic gum bougies are those most used at the present time; their thickness varies from the sixteenth of an inch, or less, to an inch or more in diameter—the larger ones being for the rectum. Bougies are frequently used by non-professional persons for opening, or keeping open, constricted passages, especially that of the *Urethra* (which see); but their employment thus is always attended with a considerable degree of danger; they have been known to break in the passage, and require an operation for their removal, or to pass into the bladder, and leave a portion there, setting up active inflammation, and greatly endangering life; if passed at all by inexperienced hands, it should be done with the utmost caution; no force should be used, and the instrument must be withdrawn if it causes violent pain; care should be taken to grease it well before passing, and the operator should begin with a small size, gradually increasing as he finds the passage easy. See *Stricture*.

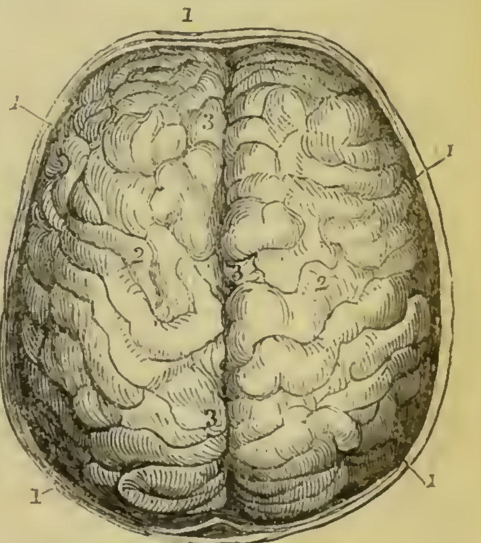
Bourdonnement. A name given by French surgeons to several varieties of imaginary sounds denoted by these terms: 1, *Syrigmus*, a ringing in the ears; 2, *Susurrus*, or whizzing sounds; 3, *Bombus*, beating, or buzzing sounds.

Bovina Fames (Latin *bos*, an ox, and *fames*, hunger). Voracious appetite, sometimes called *Bulimia*.

Brachium (Greek, *brachion*, the arm). Hence the term *brachial* is applied to a muscle, artery, and the lymphatics of the arm, and to the *axillary plexus*.

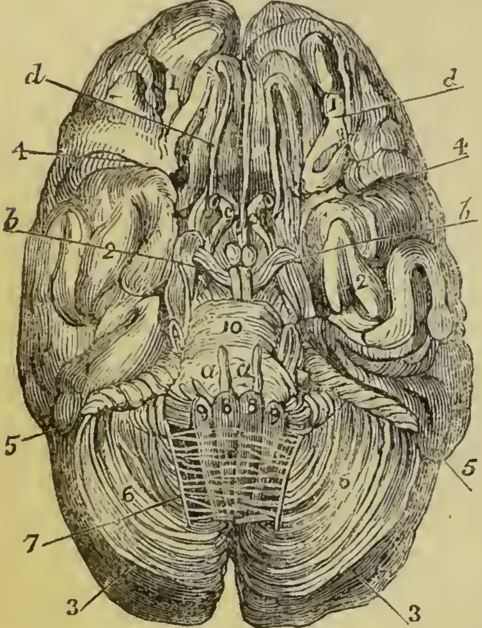
Brady Spermatismus (Greek *bradus* slow, *sperma* semen). Seminal mis-emission, in which the discharge is retarded by organic weakness. See *Semen*.

Brain. This is a collective term signifying those parts of the nervous system, exclusive of the nerves themselves, which are contained within the *Cranium* (which see). The human brain, the average weight of which is three pounds in the male, and four or five ounces less in the female, is divided into three distinct parts, called the *Cerebrum*, *Cerebellum*, and *Medulla Oblongata;* these several parts are invested and protected by membranes, and the whole together constitute the *Encephalus*, Greek for within the head. Of the membraneous coverings which enclose that soft pulpy organic mass, two have been called *mater* (mother), from the old notion that they gave rise to all the other membranes of the body, these are the *Pia Mater* and *Dura Mater*; the former is a very delicate tissue, covered in every part with minute blood vessels, which are, in fact, the nutrient arteries of the brain, before entering which they divide and subdivide upon the external surface to an extreme degree of minuteness so as to prevent the blood entering upon the tender cerebral substance in too forcible a manner. The *Dura Mater* is a much stronger and coarser membrane, which lines the inner portion of the skull, and forms an external covering for the brain and its appendages. It gives off several elongations, which are called *processes*, and which descend between certain portions of the brain; that termed the *superior longitudinal process* is the most remarkable on account of its size, it extends from the fore to the back part of the skull between the latter halves of the cerebellum, and on account of its shape, has been called *falx cerebri*, the first term meaning scythe-like. In the above cut,



which exhibits the upper surface of the brain, the cleft or separation of the halves, or hemispheres of the cerebellum (2) occupied by this process, is distinctly marked (3); the outer lines (1) represent the cut edge of the cranium, whose relative thickness they exhibit.

In the next cut we have a view of the



base of the brain; No. 1, is the cerebrum or brain proper, occupying the upper part of the cranium, and divided into two hemispheres, each of which is subdivided into an anterior, middle, and posterior lobe (1, 2, 3), between these lobes are fissures or boundaries (4, 5), termed clefts or *solci*, which penetrate to the depth of about an inch. The two hemispheres of the cerebellum, or little brain, which occupies the lower or back part of the cranium, are marked 6; they differ in form and arrangement from the superior portion being composed of flattened *laminæ* or layers; 7 is the *medulla oblongata*, very much the smallest portion of the mass, which passes out of the cavity of the cranium into that of the vertebral canal, being a continuation of the spinal cord, of which the whole brain may be considered as an expansion; *a*, *b*, *c*, *d*, mark the shape and position of certain cerebral nerves.

It has been well observed that taken as a whole, the nervous mass constituting the brain is strictly symmetrical, that is, the different parts of which it is composed are so arranged, that if the organ be supposed to be divided into two lateral halves by a plane passing perpendicularly through the centre, the parts placed on each side of this plane have a perfect correspondence with each other, and form, in fact, reduplications of each other. The principal parts of the cerebral mass are thus double, but they are all united in the median line with their halves of the opposite side. This union is effected by medullary bands of various sizes, and fissures, which pass from one to the other, called *commissures*. There are also *ventricles* by which the cerebral parts are separated from each other at certain places; four of them are commonly enumerated, they communicate with each other, the two largest are termed *lateral ventricles*, they pass into the interior of the cerebellum.

Under the microscope, the cerebral substance is found to be composed of pulp containing both cells and tubes; the outer portion of it is termed *cineritious*, on account of its brownish grey colour; by some it is termed *cortical*, from *cortex* bark, because it forms as it were the first coat of the mass: by others, *glandular* or *secretory*, on the supposition that it is of the nature of a gland whose office is that of secretion; it consists of fine cellular membrane, sustaining and connecting a complete network of small blood vessels. Larger in quantity, and firmer in consistence, is the inner substance termed white or *medullary;* it is said to consist of minute fibres, woven together like plaited straw. In man, the brain is much larger than in that of the inferior animals, that of an ox scarcely weighs a pound; it is in the human brain chiefly that those great inequalities of surface exist,—those "developments" on which phrenologists build their theories; they are not found in the hare or rabbit, nor in the Rodentia generally; they are neither so bold, nor so deep in the ox as in the horse, nor so much so in the horse as in the dog, seeming to increase or diminish very much with the ratio of intelligence, as does also the bulk of the brain; in fishes it is very small, and in the invertebrate animals diminishing to mere nervous ganglions. It is curious to observe that while in the chaffinch or robin, among birds, it approaches to the proportionate size of that of the human being; in the goose, it bears a very much smaller proportion to the bulk of the body.

Diseases of the Brain. To *Congestion* we have already made some reference, (see *Apoplexy*, *Bile*), it is caused by morbid accumulation of blood in the vessels, and may proceed from various causes; persons of a full plethoric habit are most subject to it; local and general bleeding, quiet both of mind and body, with cooling aperient medicines, abstinence from all rich and stimulating foods and drinks, is the proper treatment; in those of spare weakly habit, it is sometimes owing to want of vital energy, and in this case, the diet should be rich and stimulating; and the aperients, if required at all, must be of a cordial nature; but all this should be left to the medical practitioner; the disease too nearly affects the issues of life and death, to be tampered with.

Concussion of the Brain is nearly always produced by a blow or a fall; it is one of the most frequent injuries to which this part is exposed; it may be either slight, or severe, in proportion to the intensity of the exciting cause; in the former case, the effect is but momentary, the patient is stunned, but very soon recovers consciousness, and perhaps feels no more of it, except a little tenderness of the part struck. In the latter case, he remains unconscious, without the power to move or speak, the pulse is slow and feeble, the breathing difficult, frequently there is vomiting, and an unnatural contraction or dilation of the pupils of the eye; in this case but little can be done beyond putting the patient to bed, and keeping the surface of the skin warm by frictions and hot applications; when there is extreme depression, a little Brandy or Sal Volatile may be given, but very sparingly, because, if death does not ensue, there will be reaction, with an inflamed state of the organ. If it is simple concussion, a fatal termination is not likely; but sometimes the shock causes rupture of the substance of the brain itself, or its enclosing membranes, or of one or more of its blood vessels, causing *Effusion* (which see), in this case the patient may never rally from his state of stupor, or if he does, it will be but for a short time; there will probably be convulsions, paralysis, and apoplectic termination of his sufferings. All these are characteristic of *Inflammation* (which see). In so acutely sensible an organ as the brain it must be evident that an inflamed state of the tissue is by all possible means to be avoided, hence when reaction sets in after the stunning and depressing effects of concussion have passed off, the most active measures should at once be taken.

If a medical man is not within call, and the alarming symptoms increase in intensity, there may be sufficient warrantry for an unprofessional person to bleed: eight, ten, or twelve ounces of blood may be taken from the arm, or a dozen leeches may be applied about the head, or the patient may be cupped in the nape of the neck; the latter is perhaps the best mode of depletion, as it is effected quickly, and very near to the seat of disease. The hair of the head should also be cut or shaved off, and rags wet with cold water applied; if iced, so much the better.

Among the symptoms of inflammation of the brain, or its investing tissues, may be mentioned as prominent, shivering succeeded by heat in the skin, great thirst, tongue furred, pain in the head, intolerance of light, bloodshot eyes with a wild wandering look, sickness, and delirium; there may be violent and obstinate vomiting, as a first symptom, followed, after a time, by the others or some of them. It should be borne in mind that concussion of the brain is not always the result of a blow; it may be produced by a violent shock to the nervous system, such as that caused by coming down heavily on the feet from a leap. In cases of *Fracture of the Skull* (which see) the same symptoms as those described are likely to occur, as in these there is generally both concussion, and its common result, inflammation. In children, especially those of a scrofulous habit, inflammatory action very commonly leads to a form of disease popularly called *Water on the Brain*, or *Hydrocephalus*, (which see); most commonly, however, this is a chronic disease dating from birth, or soon after.

The state and condition of the Brain, even when not subjected to the action of any particular disease varies considerably in accordance with the advance of years; very frequently in old age there is a deficiency of blood in the vessels of the Brain, and this occasions very distressing symptoms, such as headache, giddiness, slowness of intellect, and paralysis. Very much the same results follow a *Softening of the Brain*, only in an aggravated degree; in this case imbecility and paralysis is almost sure to come, and there is little or no hopes of any alleviation of them. In old age too, it should be observed that the arteries of the brain become less elastic than at an earlier period of life, more brittle and liable to rupture; hence indulgence in any excesses, or violent exertion, should be especially avoided by the aged. For other affections of the brain see *Apoplexy*, *Delirium Tremens*, *Paralysis*, *&c.*

BRAN. This is the husk or skin of the grains of Wheat, which is broken up in the grinding, and retained in the sieve through which the flour passes. A portion of it mixed with the finer meal stimulates and assists the process of digestion, see *Bread.*

To alleviate pain, and assist the operation of the remedial measures in many forms of disease, Bran is one of the most useful of articles. It is cheap, and at all times easily procured; it is soft and yielding in its nature, and readily adapts itself to any part whereto it may be desirable to apply it, moreover, it retains heat for a very long time; hence *Bran Poultices*, and dry applications are constantly made use of in the treatment of the sick. These poultices are especially efficacious in severe local pain, whether spasmodic or inflammatory; they consist of a quantity of bran, first heated in an oven, or better still in a frying-pan, and moistened by being sprinkled freely with hot water, and quickly transferred to a flannel bag, which should be made considerably larger than the seat of the pain which it is designed to alleviate. Over this when it is applied, should be laid a piece of oiled silk, or other waterproof material, which will retain the heat, and keep the moisture from the bed, or other, clothes. Sometimes the bag is first filled with dry bran, and then plunged into boiling water; but in this way, as its absorbent powers are great, and it cannot be well wrung, or pressed out, without lowering the temperature, it is too wet, and frequently too heavy, for the required purpose. Very frequently, in acute inflammation of the chest or abdomen, its effects are to be preferred to those of either blister or mustard poultice; it is at once a counter-irritant and local vapour bath, causing free perspiration of the skin. In the inflammatory affections to which children are liable the efficacy of the bran bag is constantly tested; in the premonitory symptoms of croup, immediate resort should be had to it; when desired to act more strongly as a rubefacient it may be lightly sprinkled with Spirits of Turpentine. The effects of the moisture are sometimes produced by placing two or three folds of flannel wrung out of boiling water, and placed on the parts with a bag of hot dry bran over them; the latter application alone is scarcely to be recommended; it sometimes produces perspiration, but oftener perhaps, only dry feverish heat, and it never has the soothing effect of the moist application.

Bread. The loaf made of wheaten flour is what we understand by the term bread in this country, where rye, barley, maize, or any other gain is seldom or ever employed for the purpose of making the great pabulum of life. Chemical analysis shows that wheaten flour is composed of three ingredients, viz. gluten, in which the nutriment consists, starch, and mucilage. If simply made into a cake with water, and baked, it would no doubt be as nourishing as the leavened loaf; but then it would be far more difficult of digestion, which is greatly facilitated by the porous form given to it in the process of fermentation; this renders the mastication and consequent mixture with the saliva more easy, and thus the food conveyed into the stomach is in a better state for assimilation and absorbtion. Most persons are aware that the fermentation is effected by means of brewer's yeast mixed with the dough; but few, perhaps, know the precise way in which this acts to produce that porous state of the mass and render the bread, when baked, light and digestible. It is on the sugar, formed of the gluten and starch in combination, that the yeast acts, causing it to ferment, thus carbonic acid gas is formed, and this, on the application of heat, in baking, expands and, much of it being unable to escape from the tenacious dough, makes little cells and cavities or pores; this constitutes what is called the rising of the bread, which is light or heavy just in proportion to the perfect or imperfect performance of this process. It has been thought, by some chemists, that the dough loses somewhat of its nutritive properties by this decomposition of the gluten, but Liebig thinks that this view has little foundation.

Several kinds of what is called *Digestive* or *Unfermented Bread* are now made; sometimes Carbonate of Ammonia being used for the evolution of the Carbonic Acid gas; sometimes Carbonate of Soda with the addition of an acid—Tartaric Acid, Buttermilk, or White Vinegar. The following may be recommended as a good and easy method of making a batch of wholesome *Home Baked Bread:* To 2 pecks of good "Seconds" flour placed in a pan or trough, add ½ a-pint of fresh yeast, poured into a hole made in the middle and previously mixed with ½ a-pint of warm water; stir up the yeast and flour together in the central hole until it assumes the consistency of a thin paste or batter, over which scatter some dry flour and on it lay a cloth; put the whole by to rise, if in the winter near the fire. The "sponge," as it is called, is sufficiently risen when it cracks the coating of flour on the top. The whole must then be well-mixed and kneaded, a ¼ of a pound of salt being added, and as much lukewarm water as may be required to make it into a stiff dough; let it remain in the trough for 20 minutes, or so, then divide it into loaves and bake. The following is also a good method: Take ½ a pound of Carbonate of Soda and mix it first with about double the quantity of flour; then add it to 48 pounds more flour and mix it thoroughly, then take ½ a-pound of Muriatic Acid, put it into a gallon of water, or as much as may be required, to make the whole into a thinnish dough, which should be baked immediately. All bread should be two days old before it is eaten, to be perfectly wholesome; and that which is made of the finest flour is the least so; although few persons are aware of this, if we may judge by the general desire to have bread perfectly white and free from specks, which are caused by the husks of the grain, or bran, in which lies much of the nutriment. *Brown Bread* is certainly more wholesome than white, this is made of flour that has not been so closely sifted, and, consequently, contains much of the bran; it is slightly laxative, and thus corrects the general tendency of flour to confine the bowels. On some weak stomachs, however, its action is too irritating. To exhibit the difference, in point of nutrition, between fine and coarse flour, the French chemist Magendie, is said to have shut up two dogs and fed one upon bread made of the former, and the other upon that composed of the latter; the first died at the end of forty days, when the last was as strong and healthy as ever.

Under the head of *Adulterations*, we have already spoken of the substances which so often enter into the composition of bread; some of them are, perhaps, not injurious to the health of the consumer, and those which are, such as Plaster of Paris, Chalk, &c., are very rarely used. Quite recently, when the Lancet Sanatory Commissioners examined samples of bread purchased of many of the bakers of the metropolis, they found alum to be almost the only foreign ingredient, and this was chiefly detected in the lighter and finer kinds. That there is generally alum in the best bakers' bread, should render persons cautious of giving it to those subject to acidity of stomach, and especially to infants with whom it is always a cause of griping and flatulency. For such, the unfermented bread above spoken of, is much the best, and it should be baked a second time, slices of it being cut from the loaf, and allowed to remain in the oven until it becomes crisp and hard. When required for use it must be soaked in hot water, mixed with a little milk, and slightly sweetened. Rusks, Tops-and-bottoms, and Biscuits, which are all so many kinds of bread, well-baked, also make good *Food for Infants* (which see.)

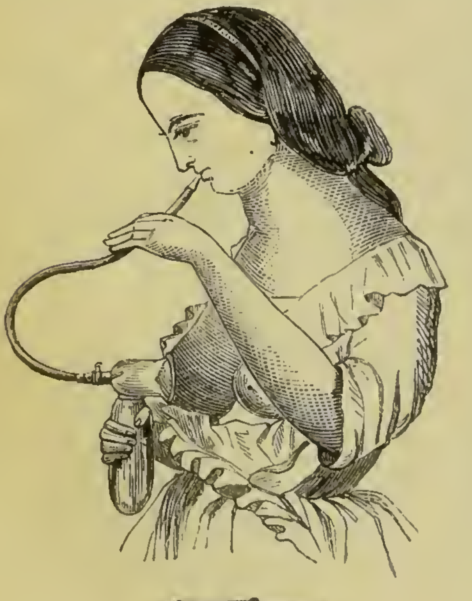
Where plenty of animal food can be obtained, children past the period of infancy may be fed upon bread made partly of rice and potatoes, or flour of maize; but where it cannot, wheaten flour only should be used, as that alone is capable of supplying the materials for the formation of *bones* and *muscles* (which see), also *Gluten*, *Nutrition*.

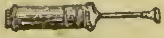
Bread and Milk. No child under sixteen or twenty months old should be fed upon this; it should never be given to one at the breast, nor for some time after weaning; for elder children, generally, it is a good nourishing breakfast diet, but it is too heavy for some stomachs; if it produces head ache, and a feeling of oppression at the chest, and of fulness in the abdomen, it should be discontinued. The following is the best method of making it:—Take stale bread of good quality, and cut it up into small pieces, then pour on it boiling water and let it stand for ten minutes, then press on the top of it a saucer, holding it over, and turn up the basin so that the water may drain away; have a sufficient quantity of new milk boiling in a saucepan, add this to the bread, mix, and pour the whole into the saucepan together, boil it up, sweeten, and it is fit for use. If the milk is very rich it should be diluted with water.

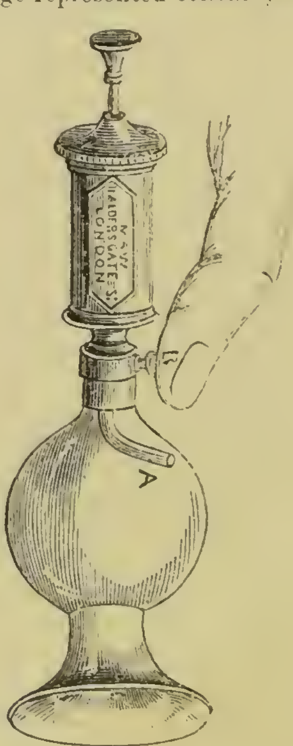
Bread Poultice. In all cases where it is desirable to keep moisture or warmth to a part this is a good application; it may be cold or warm as the occasion requires. It should be prepared thus:—Into a basin, previously scalded out, put a slice of bread with the crust taken off, stand a plate over it, and when the bread has become thoroughly saturated with the water, drain off the rest, and the poultice is fit for use; spread it out on some folded linen and apply it to the part affected. See *Poultices*.

Bread Pudding. This is a very nutritious and agreeable diet; if for a child it should be prepared thus:—Grate, or crumble, some stale bread into a cup, pour over it a sufficient quantity of boiling milk, let it stand until cool, then add the yolk of an egg, previously beaten up, boil it in the cup for a quarter of an hour.

Breast. We use this term here in its restricted sense, as applied to the fleshy protuberance common to women, in which is situated the mammary glands, for the secretion of the milk by which the infant is nourished. Its full development depends greatly upon habit and constitution, being, in some, much more early in advancing womanhood, of which it is one of the most remarkable signs, and prominent in full maturity, than in others. In the earlier stages of pregnancy, its fullest development commences; the breast swells, and the nipple enlarges, and by, or near, the time of delivery it is filled with lacteal fluid, which passes readily, on suction, into the mouth of the child. (See *Milk*.) Too frequently the proper enlargement of the breast, and increase of the nipple, is retarded by the requirements of fashion, which prescribes a certain unnatural slimness of waist to her votaries. (See *Stays*, *Tight Lacing*). The consequences, sometimes, are hardened and congested states of the tissues, an insufficient supply of milk, or a failure of it altogether; or a nipple so flattened and pressed into the breast, that it cannot be taken hold of by the mouth of the infant. Abscess, Cancer, and other evil consequences may also ensue from undue pressure upon such tender parts. We would, therefore, warn our female readers against the pernicious custom here alluded to; not only do the breasts suffer from it, but the lungs also, and other organs whose healthy condition is essential to the functions of vitality.







In speaking, then, of the *Diseases of the Breast*, we shall confine ourselves to those which affect the female breast only, and not include those of the whole *thoracic* region, or the *chest* (which see). One of the most common of these diseases is *Inflammation*, resulting in *Abscess;* various causes may produce it, such as a blow, exposure to cold or wet, great mental excitement, unnatural distension by an accumulation of milk, or too much pressure in the manner above hinted at. It may occur at any period between early and advanced womanhood, but most commonly it does occur within a week or two of childbirth, and is the result of some obstruction in the flow of the milk, or change in its normal character; such a change will be sure to occur if the milk is suffered to remain long in the breast; therefore should the infant be unable to relieve it at all, or insufficiently, artificial means must be taken to do so. There are various kinds of *Breast Pumps* used; one of the most elegant and convenient is that represented in the preceding cut which can be used by the patient herself, who has only to draw in the air from the tube, and the milk will flow in to fill the vacancy, and be received in the pendant reservoir beneath; another form is the syringe represented beneath, to which is attached a glass reservoir, with a broad flat mouth, adapted to fix on the breast and receive the nipple; a simpler and cheaper form, is a stout elastic bag with a glass mouth-piece similar to the above, and a yet more homely contrivance is a wide-mouthed bottle sufficiently capacious to hold two quarts; this is dipped in hot water, and the mouth immediately applied to the breast; the heat will have rarefied the air within, which, as it cools, contracts and leaves a vacuum, causing suction, which draws the milk into the bottle. Some nurses have the art of drawing the breast with the mouth; and it is well to let them do so, as no instrument can effect the object so well and thoroughly.

Where there is an inflamed state of the tissues of the breast, there are shooting pains, and often febrile symptoms; the part will become hard and exhibit knotty protuberances, indicating the formation of an abscess; these symptoms will be succeeded by throbbing and a sensation of weight; the skin gradually assuming a thin and red appearance, and becoming thinner until it finally breaks, and allows the escape of the matter; but, before this occurs, there is frequently much suffering and constitutional derangement; a surgeon will generally prefer to avoid this by opening the abscess. When the premonitory symptoms of mammary abscess are observed, recourse should at once be had to remedial measures: let the breast be well yet gently rubbed with a soft hand, into the palm of which is poured fresh Olive or Almond Oil; the friction should be continued for about ten minutes, and repeated every four hours or so. Goose Grease and other fatty substances are recommended, but simple Oil is best, the friction being the principal agent for good. Between the intervals of this the breast should be kept covered with a tepid water dressing; having over it oiled silk to prevent evaporation. Care should be taken during this treatment to keep the bowels gently open, and to keep under the febrile symptoms. Leeching the breast in case of threatened abscess is sometimes resorted to, but its utility is very questionable, at all events it should never be so unless under proper direction; there may be cases in which it is advisable. A mammary abscess will frequently continue discharging for a considerable period, and, during this time, the patient should be supported by a nourishing, although, light diet: stimulants are generally to be avoided, but sometimes they are really necessary. A warm bread poultice is best for the abscess; it should be changed about every four hours, and covered with oiled silk: when the discharge has nearly ceased, simple tepid water dressings may be substituted. The breast, during all this time, should be supported by a soft handkerchief tied round the neck; an application of Collodion all over the part has sometimes been used; it forms a thin coat which, contracting as it dries, affords the necessary support, if the breast is not very large and heavy; if some amount of pressure is required, strips of strapping crossing each other will effect this object. After all danger of inflammation is over, a more generous diet may be allowed; a grain of Quinine, in a little Sherry Wine, two or three times a-day, or half a-pint of Porter. Should the breast remain hard, friction with Soap Liniment should be resorted to; a drachm of Compound Tincture of Iodine to each ounce will render it more effectual.

Very painful and distressing cases of *Sore Nipples* frequently occur after child-birth; sometimes they cannot be avoided, but frequently they arise from too great an anxiety on the part of the mother, who is constantly meddling with them, applying the mouth of the child, and resorting to all sorts of expedients to draw them out: a judicious nurse will prevent this, and also take care to guard the breasts, as much as possible, from those constant alternations of wet and dry to which they are exposed. Nipple shields of ivory, or glass, with India rubber teats, may be readily procured, and should be used when the nipples are too sore and tender to bear the application of the infant's mouth; in this case the milk must be drawn from the breast by one of the contrivances above-mentioned, and given to the child in a feeding bottle, such as will presently be described (see *Infants*). Glycerine has been found a good application for chapped or otherwise sore nipples; it must be applied with a camel hair brush, first wiping the part dry with a soft piece of linen; if obtained pure, there will be little or no smell in it to annoy either mother or child; Collodion is also useful, but it causes considerable smarting. If, as is sometimes the case, there be suppuration, warm bread poultices must be applied, and after them tepid water dressing. Infants, a few days after birth, sometimes have the breasts distended with a thick milky looking fluid; and youths just arriving at the age of puberty have hard and painful swellings about the nipples; in both cases warm fomentations only are required; the parts should not be pressed or rubbed; for the child a little cold cream or simple ointment, after fomenting, is desirable. For other Diseases of the Breast see *Cancer*, *Milk Fever*.

Breath is the air drawn in, and expelled from, the lungs, in the act of *respiration* (which see); it consists of gas and watery vapour, the latter of which, in cold weather, becoming condensed, as it issues from the mouth, is perceptible to the eye. The peculiar odour of the breath, and its mode of expiration is indicative of the state of health; so that the experienced physician consults not only the pulse and the tongue, but also

Breathing, or the act of respiration which, in Pneumonia, Pleurisy, Bronchitis, Phthisis, Broken Ribs, Dropsy of the Chest, or Abdomen, and organic diseases of the Bowels and Liver will be *short;* in the four first diseases it will also be *rapid*, as it will in Croup, Hooping Cough, and all Fevers; it will be *laboured* and *painful* in acute Inflammation of the substance of the Lungs, of the Pleura, or a Broken Rib, or of Pleurodynia, all of which see. In most affections of the head, and nervous system, it is slow, usually gentle, and sometimes irregular; when laboured it is called *stertorious.* Much can be gathered of the state of the internal organs, from the positions a person assumes who labours under a difficulty of breathing.

Fetid Breath may proceed from decayed teeth, or morbid secretions about the tonsils, or disease of the lungs; in children it generally indicates a disordered state of the stomach, which may be corrected by means of purgative medicines; where it cannot be so remedied, it will be well for the patient to chew a little Cinnamon occasionally, or take some of the Aromatic pills prepared for the purpose; if the cause is local, the mouth should be washed with a weak solution of Chloride of Lime, or Soda.

Bregina (Greek, *brecho*, to moisten). This term is applied to the two spaces left in the head of an infant, where the frontal and occipital bones are respectively joined to the parietal. In infancy, this space is commonly marked by a depression, which fills up as the bones unite. The two openings are distinguished as *anterior* and *posterior.* See *Cranium.*

Bricklayers' Itch. A kind of local tetter or impetigo, to which the hands of bricklayers are subject; it is produced by the frequent contact with lime. See *Bakers' Itch.*

Bright's Disease. This is a particular disease of the kidneys; the distinguishing mark of which is the presence of the serum of the blood in the urine, which coagulates on the application of heat; there may be only sufficient to cloud the fluid, or enough to form nearly a solid mass. The causes of this disease, which was first described by Dr. Bright (hence its name), are various; it may be severe cold, repressed perspiration, or immoderate use of ardent spirits; and it not uncommonly follows Scarlet Fever. It is usually accompanied by febrile symptoms, and dropsical swellings of the face and extremities, and eventually of the body also. The best treatment is cupping in the loins, hot baths, and purging with Calomel and Jalap. A mixture as under should also be given: Sweet Spirits of Nitre, 2 drachms; Liquor of Acetate of Ammonia, 1 ounce; Camphor Mixture, 7 ounces: take two tablespoonsful three times a day. Low diet, and an avoidance of Alcoholic Stimulants. See *Kidney*, *Urine.*

Brimstone. A native mineral substance familiar to most persons; a description of its properties and compounds will be found under the head of *Sulphur.*

British Oil. A stimulant embrocation, compounded as follows:—Camphor, 1 ounce; Rectified Spirits of Wine, 4 ounces; Sweet Oil, 12 ounces; Oil of Hartshorn, 5 ounces; dissolve the first in the second, then add the third and fourth. The *Oleum Petræ Vulgari*, or Oil of Tar, is sometimes called British Oil. See *Embrocations*, *Liniments.*

Brocoli. This is a variety of the cabbage tribe, too familiar to need a description. The portion which is eaten is the undeveloped flower buds: it is a nutritious vegetable, light, and easy of digestion, if not "smothered in butter," as it too generally is. See *Cabbage.*

Brodium. A term in pharmacy synonymous with *jasculum*, or *Broth* (which see).

Broiling. This is a method of cooking a good deal practised among the lower classes; the meat so cooked is nutritious, but not fit for weak stomachs; the inner portion, it is true, retains its juices, but the outer is hardened and rendered difficult of digestion.

Broken Bones. See *Fractures.*

Broma (Greek *brosko*, to eat). Anything that is masticated; hence *Bromatology*, a discourse on, or, a description of food.

Bromine (*bromos*, a stench). This is, in substance, very similar to Iodine in its properties and uses. It is an elementary fluid found in sea-water, salt springs; in some mineral waters, marine plants, and animals. The form in which it is employed medicinally is—

Bromide of Potassium—that is, Bromine dissolved in *Liquor Potassæ;* it is given chiefly in enlargement of the spleen, hypertrophy of the heart, chronic anthritis, goitre, and scrofulous swellings. It is more powerfully irritant than even Iodine, and must be given with great caution; the dose is from 3 to 10 grains. There is also *Bromide of Iron*, of *Calcium*, and of *Mercury*, and *Deutobromide*—all powerful medicines, with which no unqualified person should meddle. In case of accidental poisoning by Bromine, vomiting should be excited as soon as possible. See *Poisons.*

Bromuret. Is a combination of *Bromic Acid* with *Iodine*, *Phosphorus*, or *Sulphur*, all of which see.

BRONCHI. Greek *Bronkos*, the wind-pipe, from whence comes also *Bronchia*, the ramifications of the trachea; *Bronchial*, the name of the glands situated around the bronchi; *Bronchitis*, inflamation of the bronchea; *Bronchocele*, an enlargement of the thyroid gland—(in Switzerland this is called *goitre*, which see; also *Derbyshire Neck*); *Bronchophone*, the resonance of the voice over the bronchia; *Bronchotomy*, an incision made into the *larynx* or *trachea*, both of which see.

BRONCHITIS. Is one of the above-named forms of disease which claims a prominent notice at our hands, because it is, in this country, most prevalent and fatal. It may be succinctly described as inflammation of the lining membrane of the passages of the throat, through which the work of respiration is carried on. It will be evident that an inflamed state of these passages must, besides the local irritation caused thereby, seriously interfere with the vital functions.

Bronchitis is either *acute*, *sub-acute*, or *chronic;* the former stage may commence immediately after exposure to cold; most usually the lining membrane of the eyelids, nostrils, and throat are first affected, and then the inflammation extends downwards into the chest. The earlier symptoms are running at the nose, watering of the eyes, frequent sneezing, and all the distressing symptoms of what is generally known as *Influenza*, which see. The fever generally runs high, there is extreme lassitude, with headache, and probably a troublesome cough, with expectoration of mucus; with adults this, the most active stage of the disease, frequently assumes a very dangerous character, and prompt measures are required to arrest its progress. If the febrile symptoms continue to increase in intensity, and the breathing becomes difficult from the clogging of the tubes with mucus, there is great reason for apprehension. The patient should, as a matter of course, be confined to bed; warm diluent drinks, such as Linseed Tea, or Barley Water, with a slice or two of Lemon in it; gentle aperients, if required; foot-baths and hot bran poultices to the chest; should the patient be of a full habit, it will be desirable to abstract six or eight ounces of blood, by cupping between the shoulders, or apply ten or twelve leeches to the chest. The chief dependence, however, is to be placed upon nauseating medicines—4 grains of Ipecacuanha Powder, in a little warm water every quarter of an hour, until vomiting is produced, and this should be kept up at intervals of two or three hours; Calomel, also, in 4-grain doses, should be administered about once in every eight hours, if a manifest improvement does not take place. Sometimes a state of coma or collapse follows this treatment, and then it is necessary to give stimulants—Carbonate of Ammonia in 5 grain doses, or Sal Volatile, ½ a teaspoonful about every hour: these are preferable to alcoholic stimulants; but, should they not succeed, Brandy may be tried, with strong Beef-tea. Should the urgency of the symptoms yield to the emetics, a milder treatment may be followed out. The following is a good mixture:—Ipecacuanha wine, 1 drachm; Aromatic Spirit of Ammonia, 2 drachms; Carbonate of Potash, 1 drachm; water, 8 ounces—two tablespoonsful to be given every four hours; if the cough is troublesome, add a grain of Acetate of Morphine. The diet should be light and nourishing, and all exposure to cold must be carefully avoided. In children, acute Bronchitis does not commonly produce such marked effects as in adults, although sometimes it is extremely rapid and fatal, allowing little time for the action of remedies, which should be much the same as those above recommended, with proper regard, of course, to difference of age. If leeches are applied, a couple will generally be sufficient: if the child is unweaned, it must be allowed to suck very sparingly, if at all; the best plan is to give it milk from a spoon, or feeding-bottle, as the quantity can be thus better regulated. Great attention must be paid to the bowels, and also to the temperature of the air breathed by the little sufferer. A blister on the chest, about as big as a half-crown, may be sometimes applied with advantage, if the leeches and hot bran do not give the desired relief.

Winter Cough, Catarrh, Asthma, and other affections of the chest and bronchial passages are very commonly but forms of sub-acute or chronic Bronchitis, the exciting causes of which are nearly always exposure to cold and moist air, against which, in this variable climate, people cannot too sedulously guard. We shall have to speak more on this head when we come to treat of *Consumption*, (which see). At present, let us observe that, for the troublesome coughs which almost invariably attends confirmed Bronchitis, and especially in the aged, Opium is the most effectual remedy. The best form of administration is perhaps the old Paregoric Elixir, or, as we now call it, Compound Tincture of Camphor, taken with Ipecacuanha or Antimonial Wine—say half a drachm of the former, with 10 grains of either of the latter, in a little sugar and water, or Linseed-tea; if there are febrile symptoms, add 15 minims of Sweet Spirits of Nitre to each dose.

It is especially during the spring months, and when there is a prevalence of east wind, that Bronchitis attacks young and old, often hurrying the former to a premature grave, and making the downward course of the latter more quick and painful: with aged people, in such cases, there is commonly a great accumulation of mucus in the bronchial tubes, which causes continued and violent coughing in the efforts to expel it, which efforts are often unsuccessful; thus the respiration is impeded, the blood, for want of proper oxygenisation, becomes unfit for the purposes of vitality, and death, often unexpectedly sudden, is the consequence. Such bronchitic patients must be carefully treated—no lowering measures will do for them, but warm and generous diet; Opium cannot safely be ventured on. Warm flannel next the skin, a genial atmosphere, inhalation of steam—if medicated with Horehound, or some demulcent plants, so much the better—a couple of compound Squill Pills at night, and during the day a mixture, composed of Camphor Mixture, 6 ounces, with Tincture of Squills, Wine of Ipecacuanha, and Aromatic Spirits of Ammonia, of each 2 drachms, with perhaps 2 drachms of Tincture of Hops—take a tablespoonful every three or four hours. Such is the most rational mode of treatment; and this, and others to which we have alluded, are some of the forms in which bronchial disease manifests itself. In all these forms, the condition of the digestive organs requires great attention; the cough, especially, when it assumes a spasmodic character, depending frequently upon the state of the stomach; so much so, that, when the stomach is empty, a little food taken during a violent fit of coughing has been known to stay it immediately. See *Cough*, *Expectoration*.

Bronchlemitis (Greek, *bronkos*, the windpipe; and *lemma*, a sheath). A membrane-like coating of the bronchia, caused by inflammatory action.

Bronchotomy. In cases where suffocation appears imminent from the stoppage of the passage of air into the lungs, owing to the tubes being clogged with mucus, or from some other cause, an artificial opening is sometimes made into the trachea or windpipe, and to this operation the above name has been applied; it is also sometimes called *Tracheotomy* (which see).

Broom. This is the *Spartium Scoparium*, or *Genista* of botanists, a plant common enough in England; it has cathartic and diuretic properties, which render it useful in some cases of dropsy, and other diseases of the kind. The tops and seeds are the parts used, but principally the former; they are usually taken in the form of decoction, prepared thus:—Fresh Broom tops, 1 ounce; Water 1½ pint—boil down to a pint and strain: dose, a wineglassful two or three times a-day. A stronger decoction has been recommended in cases of hydrophobia: the dose of the powder, either of tops or seeds, i from 1 scruple to 1 drachm. In liver complaints the above decoction, with that o Dandelion, is said to be efficacious.

Broth. A light nourishing diet fo invalids, made by boiling mutton, veal, o chicken, in water for some hours; whe done it should be set aside to cool, when th fat will rise to the top and may be taken off It can be warmed up when required, an seasoned or flavoured to palate; it is les rich than beef tea or soups, and perhap equally nourishing. See *Diet*, *Regimen*.

Brow Ague. A periodic headache, s called because confined to the forehead is distinguished from rheumatism by th marked regularity of its attacks, whic sometimes only affect half the head; and i this case it is termed *hemicrania*. It is n doubt a neuralgic affection, and should b so treated. See *Neuralgia*.

BRUCINE. A vegetable alkaloid analagous o Strychnine in its effects, but much less owerful; it is found in the false Angustura ark, also in Nux Vomica, from which the Strychnine is extracted; it is intensely itter, slightly soluble in water, and, on ooling, assumes the consistency of wax: he dose is from $\frac{1}{3}$ to $\frac{1}{2}$ grain, gradually in-reased to $1\frac{1}{2}$ grains, or until some effect is roduced; it is given in paralysis and lead olic. There is a Tincture of Brucine, he dose of which is from 6 to 24 drops.

BRYGMUS. (Greek *Brucho*, to gnash with he teeth). The grinding or gnashing of the rgans of mastication which takes place in ome kinds of disease.

BRYONY (*Bryonia Dioica*). The wild Bryony f our hedges, a plant formerly held in con-iderable repute for its medical virtues, but ow seldom used; the root has powerful rastic properties, which render it somewhat angerous, an overdose of it having proved atal. *Bryonin* is an alkaloid extracted from his root, a yellowish white substance with red or brownish tint; being much more owerful, of course it is even more drastic nd dangerous than the root itself.

BUBINOCELE (Greek *bubo*, the groin, nd *ikele*, a tumour). A species of hernia where the bowels protrude at the abdominal ring; it is commonly called *Inguinal Hernia* (which see).

BUBO (Greek *boubu*, the groin). A swelling of the lymphatic glands, particularly those of the *groin* and *axilla*, which see. It may be either *Constitutional*, as arising from pestilential diseases, such as the plague, of which it is a frequent symptom; or, *Sympathetic*, from the mere irritation of a local disorder; or, *Venereal*, from the absorption of the syphilitic virus. Scrofulous swellings of the inguinal and axillary glands may be considered as examples of buboes from constitutional causes; these, and those arising from mere irritation, the consequence of a local disorder may be looked upon and treated as simple cases of *Inflammation* (which see); Leeches, cold lead lotion, with the administration of saline purgatives, will be sufficient for them; but where the bubo proceeds from venereal taint, Mercury must be freely administered, and the system, if necessary, be lowered by bleeding. The treatment of the swelling itself, which, in this case, commonly assumes a coppery hue, must be the same as that of an *abscess* (which see). Before suppuration takes place, the swelling sometimes becomes as large as a hen's egg, and extremely painful; warm poulticing and fomentation to ripen it, and then a free incision to let out the purulent matter, will be the treatment for those who are not disposed to await the softening of the integuments, and breaking of the skin. After the discharge has ceased, a lotion of Nitrate of Silver, in the proportion of about 4 grains to $\frac{1}{2}$ a pint of distilled water, and Zinc Ointment for dressing; if there is proud flesh, a few grains of Red Precipitate should be sprinkled on the spots, or they should be touched with Caustic.

BUCCAL (Latin *bucca*, the cheek). A term applied to a branch of the internal maxillary artery, to certain branches of the facial veins, and to a branch of the inferior maxillary nerve. See *Cheek*.

BUCCINATOR (Latin *buccina*, a trumpet). A muscle of the cheek brought much into play by trumpeters. See *Cheek*.

BUCHA. (*Barosma Serratifolia*), natural order *Rutaceæ*; possesses stimulant, diuretic, and diaphoretic properties, acting specially upon the mucous membrane of the bladder; it has been recommended in dropsy, dyspepsia, chronic rheumatism, and cutaneous affections. Dose of the powdered leaves, from 20 to 30 grains; of the tincture, from 1 to 2 drachms; of the infusion, from 1 to 2 ounces. This is made by pouring a pint of boiling water on 1 ounce of leaves, and letting it stand in a covered vessel for 2 hours.

Buck Bean (sometimes called Marsh Trefoil : scientific name *Menyanthus Trifoliata :* belongs to the natural order *Gentianeæ*). Is tonic and astringent; in large doses, cathartic, useful in scurvy, scrofula, gouty affections, and fevers : dose—1 scruple to 3 of the powder; of the infusion, 1 to 3 ounces; of the extract, 10 to 15 grains.

Bucnemia (Greek *bou*, a sign of augmentation, and *knemia* the leg). The term signifies a swollen or tumid leg. See *Leg*, *Phlegmatia dolens*.

Buffy Coat. The buff-coloured fibrin which appears on the surface of blood taken in certain states of disease. See *Blood*.

Bulbo-Cavernosus. The name of a muscle situated beneath the bulb of the *urethra* (which see), and *Muscles*.

Bullæ (Latin for bubbles). Portions of the skin raised by watery fluid into vesicles. See *Blains*, or *Blebs*.

Buckthorn. A shrub indigenous to Britain *(Rhamnus Catharticus;)* natural order *Rhamnaceæ ;* sometimes called the Purging Buckthorn, from the cathartic properties of its berries, which are used fresh, or made into a syrup—the *Syrupus Rhamni* of the Pharmacopœia. It is given chiefly in dropsy and worms, the dose being from half an ounce to an ounce : of the fresh berries 20 may be taken, or from 1 to 2 drachms of th dried ones.

Bulimia (Greek, *bous*, an ox, and *bou* *limos*, great hunger,) voracious appetite. It synonyms are *Adephagia*, from *adin*, mucl and *phago*, to eat; *Bupeina*, from *bous*, a ox, and *peine*, hunger; *Cynorexia*, fro *kyon*, a dog, and *orexis*, appetite; *Phag* *dæna*, from *phago*, to eat as an *ulcer* (all which see).

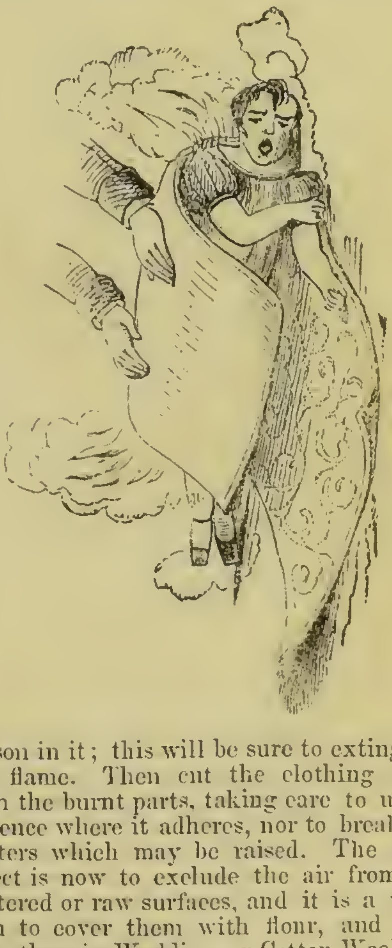
Bunion. This painful and annoyin kind of swelling is the result of inflamma tion of a small bursa, situated just over th joint, at the ball of the great toe; the pre sure of tight shoes is generally the excitin cause, and all such pressure should be once removed. During the first stages, o or two leeches should be applied to t swelling, with warm fomentations and bre poultices. A permanent enlargement of t part is generally the result, and this mu be studied in taking measure for the boo An application of caustic will sometim reduce it considerably; it should be ke covered with Burgundy Pitch, or So Plaister, spread upon soft leather, or a ci cular piece of the fungus called Germ Tinder.

Buphalmus (Greek, *bous*, an ox, a *opthalmus*, the eye). A form of opthalm disease, called Oxeye. See *Hydropthalmi*

Burdock. This is another familiar Bri- sh plant useful for its medicinal qualities, ing aperient, diuretic, sudorific; it is ven in rheumatism, gout, syphilis, chronic thma, and calculous complaints. The scien- ic name is *Arctium Lappa*, or *Bardanus*. e decoction is made by boiling 2 ounces the leaves in a pint of water: dose, a cupful several times a-day.

Burgundy Pitch (Latin, *Pix Abietana*, *Burgundica*). A resinous substance, pro- red from incisions in the *Pinus abies*, and me other species of the pine tribe; it ould be of a pale yellow colour, brittle, d fragrant. Much of that sold in the ops is but common resin melted and ained, with perhaps a small portion of e genuine article. Its chief use in medi- ne is in the preparation of various plaisters, ed as rubefacients and strengthening ap- ications. That most employed is the Pitch aister (*Emplastrum Picis*) of the London armacopœia. This substance is also called *ankincense* and *Thus* (which see); also *itch* and *Plaisters*.

Burns. There are no more frequent, stressing, and dangerous accidents than ose which result in the above; they cause eat pain, often amounting to agony, cal injuries of a most serious character, d permanent constitutional derangement, en if death does not immediately or quickly ensue. The first rule to be observed in the event of the clothes catching fire, is to avoid running away for assistance, as the motion will only fan the flame, and increase the evil. Presence of mind in the sufferer is rare on such an occasion, but the best plan is to lie down and roll on the floor, screaming of course for assistance. Whoever answers the call should snatch up a rug, or piece of carpet, or other woollen article, and act as represented in the accompanying cut, completely enveloping the person in it; this will be sure to extinguish the flame. Then cut the clothing away from the burnt parts, taking care to use no violence where it adheres, nor to break any blisters which may be raised. The great object is now to exclude the air from the blistered or raw surfaces, and it is a usual plan to cover them with flour, and then wrap them in Wadding, or Cotton Wool. A good application is either of the above substances saturated in Lime Water and Linseed Oil, equal parts mixed; this is extremely cool and soothing, and it greatly assists the healing operation; it should not be disturbed for some days, unless the discharge should be great, and the wounds painful, in which case a fresh application of the same should be prepared, and put on immediately on the removal of the other.



Whisky, Brandy, or some other strong spirits, and even Turpentine are recommended by some; but we question if they are so efficacious as the above remedies, and the anguish which they cause at first is a serious objection to their use: the Wadding or Cotton wool covering is sometimes applied quite dry, with good effect; and where the tissues are not deeply or extensively injured, a lotion composed of an ounce and a half of Vinegar to a pint of Water is a good application, as is also a saturated solution of Carbonate of Soda. The flour dredging is that which is the most readily available, and it is perhaps as good as any; it should be applied immediately, and repeated as often as moisture is perceived issuing through the crust which it forms over the burnt parts; if these have fresh sweet oil brushed over them with a feather, previous to the application of the flour, it will adhere better. That which is most to be apprehended in severe burns is the great constitutional depression which often follows the excitement and severe pain, especially is this the case with children, and when the seat of this injury is the chest or abdomen, or other vital part; hence the effects should be closely watched, and stimulants administered, if there are such symptoms as shivering, pallor of countenance, sinking of the pulse, or coldness of the extremities, Ammonia, Wine, or Spirits, must then be given in doses sufficient to arouse the failing powers, without too much exciting the brain. If there is excessive pain, a slight opiate should be administered to allay the irritation of the nervous system, which, however, frequently receives so severe a shock as to lose its sensibility for a time; and when this is the case there is great reason to apprehend a fatal result. A burn, if properly treated, and unless very severe, will generally do well, and require little after-dressing; but if the blisters are suffered to break, and the true skin beneath becomes inflamed by exposure, matter will be secreted, and troublesome ulcerations formed: Bread-and-water poulticing will be the best treatment in this case, with Goulard lotion, if there is much inflammation, or an ointment composed of extract of Goulard, 1 drachm, mixed with 1 ounce of fresh lard; this should be applied spread on soft linen.

When the burn is deep, after the flour has been on for some days, poultices as above should be applied until the coating of flour all comes away, and the wound looks clean and clear; after which the simple water dressing will be best, and when nearly healded the Goulard ointment as above.

When parts immediately contiguous a
involved in the burn, care must be taken
interpose dressings, or they may become pe
manently united.

After the more immediate constitution
effects of a severe burn have passed off,
will be necessary to be careful as to tl
patient's diet; which should be sufficient
nourishing and stimulative, especially whi
discharge is going on; taking care, hov
ever, to reduce it if febrile symptoms shou
set in. So constantly are these painful acc
dents occurring, and so frequently does
happen that, the care of a medical man ca
not be obtained for them that, it behoves
heads of families to make themselves acquain
ed with the best remedial measures. Wh
they are very severe, every possible eff
should be made to obtain medical aid; if th
are but slight, this may well be done withou
It should be borne in mind that the princip
aims in the treatment of such cases a
first, the protection of the injured parts fr
atmospheric influence; secondly, to ke
down inflammatory action, both local a
constitutional; and thirdly, to soothe t
nervous irritation which may arise, and
sustain the system should too great depre
sion take place. See *Scalds*.

BURSÆ MUCOSÆ (Latin, for *mucus bag*
These are little membraneous sacs, situat
about the joints of the bones where th
work upon each other, and containing
oily kind of fluid, which serves to lubrica
the joints, and thus prevent destructive fri
tion. A description of these is called *Bu*
salogy (which see), and *Mucus*.

BUTTER. (Latin *butyrum* from Greek *bo*
a cow, and *turos* coagulum). The oily co
stituent of cream separated by churnin
Buturine is the oleaginous principle p
curable from butter, and from this aga
comes *Butyric Acid*, with *Capric* a
Caproic Acids, which buturine yields, wh
it is converted into soap. The term is a
applied to several butter-like substanc
such as Butter of Antimony and Bism
which are in fact but chlorides.

Whether butter is wholesome, or the
verse, has been a subject of considerable co
troversy; when fresh, taken in moderati
and mixed with farinaceous substances,
is certainly nutritious, and to persons i
good state of health, wholesome; no dou
in certain states of the system, and of t
digestive organs, it is injurious, giving r
to biliary derangements, and all their tr
of distressing symptoms. If the melting
butter is effected by gentle heat only, it
sumes no other condition than that when i
exposed to the heat of the stomach, and it c

quently must be as wholesome, as if taken
lid ; it's being generally considered other-
ise, is to be attributed rather to the ex-
ssive quantity taken in the melted state,
ian to any incompatibility of the butter
self with the due performance of the vital
unctions. The case is very different when
iis substance is exposed to a high tem-
erature, as in the process of baking, in
astry ; it then undergoes a change in its
iaracter, giving out and imbibing certain
olatile principles, and becoming indiges-
ble, and consequently irritating to the
omach ; this is the case in a greater degree
en with rancid butter, which contains
rtain acids rendering it almost poisonous.

From these remarks, it may be gathered
iat we do not consider butter taken in
oderation, and by persons in a good state
health, to be unwholesome; nevertheless,
r those of weak digestive powers, or who
e subject to biliary derangements, it will
well to abstain from it, and especially so
hen it has been changed in its composition
subjection to great heat. See *Bile*,
ndigestion.

Buttermilk. This is the thin acrid fluid
hich remains in the churn after the
paration of the butter is effected ; it makes
agreeable and wholesome acidulous
rink, either in health or disease, and is
pecially useful in cases of fever. Artificial
uttermilk may be prepared by putting a
uart of milk into a gallon bottle, and
iaking it until the butter is separated ;
esh air should be occasionally admitted by
he removal of the cork.

Butter of Cacao. An oily concrete
iatter of a firmer consistence than suet, ob-
iined from the Cacao or cocoa palm, which
lso produces *Chocolate* (which see) and
ocoa.

Buxina. An alkaloid procured from the
uxus sempervirens, a plant of the order
uphorbiaceæ (which see).

Cabbage. Under this name are included
everal species of the genus *Brassicæ*, which
lso comprehends *Turnip*, *Rape*, *Cole* or
ale, as well as the common culinary
abbage (*Brassicæ Oleraceæ*) of which there
re many varieties, all produced by culture.
s articles of diet they are wholesome and
utritious ; they are not, however, suitable
or persons of weak digestion, and being
ery liable to decomposition, should always
e taken fresh.

Cacao. The Chocolate Nut Tree (*Theo-*
roma Cacoa), belonging to the natural order
terculiaceæ, the bruised seeds of which form
he agreeable and nutritious beverages called
hocolate and *Cocoa* (which see).

Cachexia (Greek *kakos* bad, *exos* habit). A bad habit of the body ; the term is generally applied to an unhealthy state of the system, resulting from want of nutrition, bad air, or other depressing causes, thus among cachectic diseases are reckoned *Atrophy*, *Scurvy*, *Rickets* (which see).

The deposition of tubercles in the bowels, brain, liver, lungs, or any other organ, is very common in Cachexia, which is found to occur most frequently, in large towns, where people are crowded together, and are obliged to subsist on impure and unwholesome food ; they have generally a sickly, sallow look, complain of debility, and often have a distressing cough. Change of air and diet will be the best remedial measures ; removal into the country, if possible, or a short sea voyage ; let the food be digestible and nourishing, with a frequent variety ; fruits are good. Sarsaparilla is frequently found beneficial after a mild course of Mercurials, and, as a tonic, Iodide of Iron, 2 grains, three times a-day, in bitter infusion ; or the following formula :—Syrup of Iodine of Iron, and Essence of Sarsaparilla, of each 1 ounce, Water, 6 ounces :—take two tablespoonsful three times a-day with, if the bowels are sluggish, a Compound Rhubarb Pill every, or every other night : if the evacuations are deficient in bile, a Plummer's Pill, at bed-time, for six nights or so will be beneficial.

Cadmium. A metal sometimes found in combination with Zinc ore. The Sulphate of Cadmium is occasionally used for the same purposes as that of zinc. When given internally, which is very seldom, the dose is from a $\frac{1}{4}$ grain to 3 grains, it should be rubbed down with sugar. As a Collyrium, with or without Opium, it may be used with advantage ; about 3 grains to an ounce of distilled water is the proper strength.

Caduca (Latin *Cado*, to fall). The deciduous or falling membrane of the uterus, so called because it is cast off therefrom. See *Uterus.*

Cæcum (Latin *Cæcus*, blind). This is the commencement of the large intestine, at its point of junction with the alimentary canal, it is described by anatomists as a blind pouch, or cul-de-sac, about two inches and a-half in length, forming, as it were, the outer court or vestibule of the intestine of which it is the most dilated portion : it has a tube like appendix, which is usually equal in diameter to a goose quill, about five or six inches long, and more or less coiled upon itself, being retained in the coil by a fold of the *peritoneum* (which see), also *Alimentary Canal* and *Intestine.*

Cæcitas (Latin *Cæcus*, blind). A term signifying *Blindness* (which see).

Cæsarian Operation. This is one of the most critical of surgical operations, and is only resorted to, in cases of absolute necessity; when child-delivery can in no other way be effected, an opening is made through the parietes of the abdomen and uterus for the purpose of accomplishing the object, this is the *abdominal* Cæsarian operation; there is another, less dangerous, called the *vaginal*, which is an incision occasionally made into the *cervex uteri* with a view to facilitate delivery. Sometimes, also, when the fœtus, in consequence of a rupture of the womb, escapes into the cavity of the peritoneum, or lies in the ovary, where there is an extra uterine conception, an opening is made for its extraction. It would be useless to attempt any description of these operations, as none but a skilful surgeon could attempt them. It is said that the birth of Julius Cæsar was effected in this manner, hence the name given to this process. See *Hysterotomia.*

Cajeput Oil (*Oleum Cajeputi*). The volatile oil obtained from the leaves of a plant called the *Mælaleuca minor*, of the natural order *Myrtaceæ.* This oil is a diffusable stimulant, carminative, antispasmodic, and sudorific, useful in hysteria, all flatulent disorders, rheumatism, and low fevers; the dose is from 3 to 10 minims. Cajeput Oil, ½ a-drachm; Castor Oil, 1 drachm; Olive Oil, 4½ drachms, is a goo liniment; if a stronger stimulant fo rheumatism is required, use this: —Soa Liniment, Camphor Liniment, and Cajepu Oil, of each an ounce; mix and rub wel in. See *Counter Irritation.*

Caffeine. A white, crystalline, volatil matter found in coffee, of which it is th characteristic principle: it consists, in 10 parts, of carbon, 46·5; hydrogen, 4·8; oxygen, 27·1; nitrogen, 21·6; and i its constitution closely resembles that of animal muscle (see *Coffee*), in which is also found *Caffeic Acid*, wherein consists much of the peculiar odour of the plant; this acid combined with Alumina, Lime, Iron, and Magnesia, forming what ar called *Caffeates* of those bases.

Calabash. The Pumpkin Gourd o tropical countries, from the seeds of which is prepared an acidulous drink very refreshing in fevers, stranguary, &c.

Calaguala. A species of *Aspidium*, the root of which is used, in America, in dropsy and other diseases.

Calamus (Latin for a reed). The root of the *Acorus Calamus* or Sweet Flag, a plant of the natural order *Acoraceæ*, is sometimes employed medicinally; it is an aromatic stimulant, and has the advantage of rarely causing febrile excitement; it has been employed chiefly as an adjunct to other stimulants and tonics; in weakness of the digestive organs, such as often occurs in gouty subjects, in atony of the stomach, agues, and asthenic fevers, it has been found beneficial: dose of the Powdered Root, from 15 to 40 grains; of the Infusion, from 1 to 2 ounces; of the Tincture, ½ a drachm to 1½ drachms. Outwardly, it is employed in stimulating baths and lotions.

Calamus Scriptorious (Latin, for a writing pen or reed). A groove with a pen-like termination in the fourth ventricle is so called. See *Heart*.

Calamine (Latin, *Calamus*, a reed). This is an impure Carbonate of Zinc, usually presented in the form of a reddish grey powder; it was formerly much used to sprinkle over wounds and excoriations, and is still so employed to some extent, although much better applications may be found. The *Ceratum Calaminæ* of the Pharmacopœia, is a good dressing for foul ulcers; under the name of *Turner's Cerate* it is much used, as a dressing for cuts and wounds. The mode of preparation is as follows: take of Bees Wax, 7½ ounces, Olive Oil 1 pint, melt and mix; when nearly cold stir in 7½ ounces of Prepared Calamine; keep stirring until the mixture is well set.

Calcaneum (Latin *calx*, the heel). Hence *calcar*, the *os calcis* or *heel bone* (which see).

Calcis or Calx (Latin for *lime*, which see), hence, also, we have *calcareous* applied to a class of earths composed of lime and carbonic acid, as chalk, marble, &c. *Calcination*, the process of forming a calx or oxide, as lime, from chalk, by exposure to heat in the open air, by which means the carbonic acid is driven off. *Calcium* the metallic base of lime, and—

Calculus. A solid or unorganized concretion found in the human body; it may be 1st, *Pulmonary*, formed in the *Lungs* (which see); 2nd, *Biliary*, formed in the Gall Bladder, and consisting of Cholesterine and the yellow resinous matter of the *Bile* (which see, and *Gall Stone*); 3rd, *Gouty*, formed in the joints of gouty persons, and consisting of Nitrate of Soda and Phosphate of Lime (see *Gout*); 4th, *Intestinal*, found in the stomach and intestinal canal, and consisting of various components; 5th, *Salivary*, formed in the *Salivary Glands* and *Ducts* (which see), and consisting principally of Carbonate of Lime; 6th, *Urinary*, formed in the *Kidneys* or *Bladder* (which see) also *Gravel* and *Stone*. There are other formations of the kind which take place in the *Liver*, *Pancreas*, *Pineal Gland*, *Prostrate*, and *Spleen*, all of which see.

It should be understood that the word *calculus* means a small pebble, such as the ancients made use of in teaching, or practising *calculations*, and the likeness of these hard masses of various kinds of *calculi*, to lumps of stone, or pebbles, is the reason of their being so called. One of the most familiar instances, of the formation of calculus, to which we can call the reader's attention, is that which is deposited from the saliva and mucus of the mouth between the teeth (see *Tartar*). For those which are formed in the internal viscera, medicines may afford a certain amount of relief, but can never effect a cure. The nature of the remedies must depend very much upon the part in which the deposit takes place; if, as in the bladder, it be accessable for instruments, it may be extracted whole, or broken up so as to pass with the urine. See *Lithotomy*.

In weight, calculi vary from a few grains to a pound or two; but they seldom in the human body exceed one or two ounces; according to Dr. Wollaston, who has devoted much attention to an investigation of their nature, they may be classed thus, placing them in the order of their frequency:—1st, Uric Acid; 2nd, Oxalate of Lime, called the Mulberry Calculus from its dark colour and rough surface; 3rd, Ammoniaco-Magnesian Phosphate, called also the Triple Phosphate; 4th, Phosphate of Lime, or Bone-earth Calculus; 5th, Fusible Calculus, or combination of the last two species, and so called from its fusibility under the blowpipe; 6th, the Mixed Calculus, composed of several of the other kinds confusedly mixed; 7th, Urate of Ammonia, 8th, Carbonate of Lime; 9th, Cystic Acid; 10th, Xanthic Oxide. The last three are extremely rare.

Calefacient (Latin *Calefaceo*, to make warm). Applied to warm medicines and stimulant applications, as the *Emplastrum Calefaciens* of the old Pharmacopœias, a compound of Burgundy Pitch and other stimulants; it is not now much used. See *Plaisters*.

Calenture (Latin *Caleo*, to be hot). A violent fever attended with delirium, incidental chiefly to persons in warm climates. See *Fevers*.

Caligo (Latin for darkness). Applied to diseases of the eye which produce dimness or obscurity of vision, as *C. Lentis*, the true cataract; *C. Corneæ*, opacity of the cornea; *C. Papillæ*, blindness from obstruction of the pupil (see *Amyosis*, *Synchisis*); *C. Humorum*, blindness from error or defect in the humours of the eye; *C. Palpebrarum*, blindness from disorder in the eyelids. See *Blindness*, *Eye*.

Callus (Latin for hardness). Applied to new bone deposited in fractures, hence *Calli*, gouty deposits (see *Calculi*), and *Callosities*, horny substances. See *Corns*, *Nails*, *&c.*

Calomel. Chloride of Mercury, a preparation much used by medical practitioners of all countries. See *Mercury*.

CALOR (Latin for heat). Hence we have *C. Fervens*, boiling heat, 212° Fahrenheit; and *C. Lenis*, gentle heat, from 90° to 100° Fahrenheit, applied to the temperature of air, water, &c.

CALOR MORDICANS (Latin for a biting heat). This is a term applied to a dangerous symptom in typhus fever, being a pungent heat upon the skin, which, if touched, leaves a smarting sensation upon the fingers for several minutes after.

CALORIC (from the same root). The cause of a sensation of heat derived from a fluid diffused through all bodies, or, as it should perhaps be defined, a certain condition of these bodies, thus, coldness is the absence of Caloric. It has been distinguished as 1st, *Sensible* or *Free*, when it produces the sensation of heat, or affects the thermometer, or having reference to bodies of which the form is permanent; 2nd—*Insensible*, formerly supposed to be latent or combined, that is, when passing into bodies during a change of form, without elevating their temperature, as into ice at 32° as it becomes water; or into water at 212°, as it becomes steam or vapour; 3rd—*Specific*, signifying the unequal quantity of Caloric required by similar quantities of different bodies to heat them equally; thus the specific Caloric of water is twenty-three times as great as that of mercury; this quality of bodies is called their capacity for Caloric. Then we have the *Absorption*, *Conduction*, *Diffusion*, *Effects*, *Evolution*, and *Radiation* of Caloric, all of which might be dwelt on at considerable length, but the above, with the information furnished under the heads *Air*, *Atmosphere*, *Heat*, *&c.*, will be sufficient for our present purpose. Let us add to this, that besides the *Thermometer* (which see), there are instruments called the *Calorimeter* and *Calorimotor*, the first for measuring the heat given out by a body on cooling, and the second for evolving caloric.

CALUMBA, or CALUMBO. The root so called, which is much valued as a stomachic bitter, is that of the *Cocculus Palmatus*, a native of the forests on the east coasts of Africa; it has a faintly aromatic odour, a bitter and slightly acrid taste; its active principle is *Calumbine*, which may be obtained by means of Alcohol or Ether. Containing nothing which is incompatible with the salts of Iron, its Infusion forms a good vehicle for them; it is prepared by pouring upon 5 drachms of the sliced root, a pint of boiling rain or distilled water, macerate for two hours in a covered vessel and strain. There is also a Tincture, of which a dose may be taken, in water, twice a day. The dose of the former is from 1 to 2 drachms; of the latter from 5 to 10 grains.

Calumba appears to act chiefly upon the mucous membrane of the stomach, and upon the secretion and quality of the bile; being free from astringency, slightly sedative, there is, perhaps, no tonic so well adapte for those of weak and dyspeptic constitutions: to such it may be given i powder, combined with Carbonate of Sod and Ginger, in the proportion of 8 drachms of each of the former to 2 drachms of the latter; taking ½ a teaspoonful in a wine-glassful of water about an hour before o after each principal meal; or it may, perhaps be more agreeable to add the Soda to a Infusion of the Calumba root and Ginger this infusion should be made fresh ever day, especially in warm weather. Se *Tonics*.

CALVARIA (Latin *calvus*, bald). Th upper part of the cranium; from the sam root comes also

CALVITES, *Baldness* (which see).

CALYSAYA is the name of a pale kind o *Bark* (which see), also *Cinchona*.

CAMBOGIA. The Latin name of the gum resin, much used in medicine as a drasti purgative, which is the produce of an uncertain species of Garcima. See *Gamboge*.

CAMPEACHY WOOD. So called from th place from whence it is chiefly brought used in dying and also medicinally. Se *Logwood*.

CAMPHOR (Arabic, *Camfur*). A volatil and highly inflammable gum, or concret juice of the *Camphora officinarum*, belonging to the natural order of *Larauceæ*. B some chemists, the term is applied to al volatile oils which are concrete at the ordinary temperature, and do not, when in tha state, contain any appreciable quantity fluid oil: thus we have Camphor of Tobacc of Anemone, of Elecampane, &c. There also an artificial camphor, which is produce by passing Hydro-chloric acid gas throug Oil of Turpentine. *Camphoric Acid* is procured by digesting Camphor in Nitric Acid its salts are called *Camphorates*, but of littl or no medicinal value. Camphor itself is white brittle substance of a very peculia fragrant and penetrating odour; bitter, pungent, and aromatic taste. It is so extremel light that it floats upon water, and extremely volatile and inflammable, burnin with a brilliant light and much smoke; is soluble in water to the extent of abo ½ a grain to an ounce; alcohol will take u half the weight of the gum; oils, bot fixed and volatile, will dissolve a consider able quantity, especially if their temperature be raised; Sulphuric and other Ethers are among its most potent solvents, but the most so of any is strong Acetic Acid. It may be suspended in mixtures by trituration with sugar, almond emulsion, mucilage, or yolk of egg: if rubbed down first with a small quantity of spirit, it readily blends with any desirable liquid. In its medical properties, Camphor is diaphoretic, antiseptic, stimulant, anti-spasmodic, narcotic, and externally anodyne. It is good in typhus, confluent small pox, and all fevers and eruptions of the typhoid class; also in measles, febrile delirium, hiccup, asthma, hysteria, epilepsy, atonic gout, mania, melancholy, and acute rheumatism, &c. It exhilarates in moderate doses, and raises the pulse without producing febrile symptoms; it also promotes perspiration, and, in certain states of the body, it induces sleep, when Opium fails to do so; but its effects are transient, and therefore it requires frequent administration. It is, to a certain extent, a corrective of the bad effects of drastic purges, diuretics, powerful stimulants, and narcotics; if taken in excessive doses it occasions anxiety, vomiting, syncope, and delirium, for all which effects Opium is the best counteracting remedy. It is given in doses of from 5 to 20 grains, in pills, powder, and emulsions; its chief officinal preparations are: Camphor Mixture, dose from 1 to 2 ounces, made by simply putting a lump of the gum in cold water, and letting it stand for a few hours; Tincture of Camphor, dose 30 to 60 minims; Compound ditto, (see *Paregoric Elixir*) 1 to 3 drachms; Camphorated Emulsion, dose from ½ an ounce to 2 ounces; Camphor Liniments, simple and compound, Soap Liniments, and Spirits of Camphor, are used externally as stimulants and counter irritants. Rubbed down with Prepared chalk, in the proportion of 1 drachm to the ounce, it makes a good tooth-powder: sniffed up the nostrils it relieves cold in the head; the vapours inhaled by means of a tube like a cigar, are useful in affections of the chest: a piece held in the mouth is thought to be a good protection against fevers and other infectious diseases; finally, its strong odour protects animal substances from the ravages of insects.

CAMPHORIC ACID is made by digesting Camphor in Nitric Acid; its salts are called *Camphorates*. Some chemists call any volatile oil which concretes at the ordinary temperature, provided it does not contain any notable quantity of fluid oil, *camphor;* thus we have *Camphor of Tobacco*, &c. There is also an *Artificial Camphor*, resembling the natural in smell, and somewhat in appearance, which is obtained by passing Hydro-Chloric Gas through Oil of Turpentine.

CANALIS (Latin, *canna*, a reed). A canal, from whence comes *C. arteriosus*, a blood-vessel which unites the pulmonary artery and aorta in the *fœtus*, (which see); *C. venosus*, a canal which conveys the blood from the *vena porta* of the liver to the ascending *vena cava* in the fœtus. *C. Petitianus*, so called from M. Petit, a triangular cavity formed by the separation of the anterior lamina of the crystalline lens from the posterior, (see *Eye*); also *Canula*, a small tube, generally applied to that of an instrument called the *Trochar*, (which see).

CANCELLI, (Latin for lattice-work). The spongey substance of the *Bones*, (which see).

CANCER, (Latin for a crab). This is a malignant disease, called by the Greeks *Carcinoma*, one of the most fearful with which medical science has to contend; it has two principal form of developements, viz., *scirrhous* or *occult*, and *ulcerated* or *open*, sometimes also called *hard* and *soft*. Many other terms are used to distinguish the differences observable in the rise and progress of this disease, one form frequently passing into the other, the scirrhous becoming ulcerated, and so on; we need not trouble our readers with these scientific terms, the above general arrangement into two classes being sufficient for our purpose.

The first manifestation of Cancer being in the skin, it has been considered by nosologists as a cutaneous disease, and arranged under the order *tubercula*. All parts of the skin are liable to its attacks, but those which appear to be most so are, the integuments of the face, the female breast, the uterus, and the organs of generation in both sexes; it sometimes affects the hands, and occasionally, from certain local causes, the male scrotum. When Cancer attacks the face, or any exposed part, it commonly begins with a small indurated spot resembling a tubercle or wart; there is no appearance of inflammation, nor is there particular sensitiveness. This condition of things often continues for a very considerable time; sooner or later, however, ulceration sets in, although it probably is long before it penetrates deeply; there may be matter secreted, which drying, forms a scab over the seat of the disease; by and bye, sharp, shooting pains will be felt, the intervals between them at first long, diminishing by degrees, until they become almost constant; there is a gradual, although slow enlargement of the tumour, which is at first moveable, but becomes afterwards attached to the skin and adjacent tissues; the ulceration spreads and deepens, and eventually becomes an open sore, with thick, hard jagged edges, and a soft centre, eaten, as it were, into irregular hollows; the discharge is thin, bloody, and irritating to the surrounding parts; there is inflammation, and hardening of the absorbent glands about the seat of disease, and the whole of the tissues appear to be invaded by a cartilaginous kind of growth, which spreads among and through them, like the creeping roots of some parasitic plant. It sometimes happens that there is extensive sloughing of the whole diseased mass, which comes away, leaving a healthy wound which heals by granulations, and happy is it for the patient when such is the case; most commonly the disease creeps on like a secret miner, investing the very citadel of life, the heart, if it be situated near it, or some other vital organ, and after, a term of, it may be years, the patient sinks exhausted by the pain and continual drain upon the system.

We have here briefly traced one of the forms in which cancerous disease is developed, proceeding as we have seen from scirrhous, or occult, to open, or true Cancer, as it is sometimes called: the first stage is distinguished by induration, coldness, insensibility, and deficiency of colour, all indicating a low state of vitality; the characteristics of the second stage or condition are tenderness, soreness, presence of colour, often approaching to a purple tint, bloody and serous discharge, cutting and throbbing pain, evidences of activity and progression.

Although mostly confined to the glands, and to certain parts, as the female breast and womb, the stomach, the liver, and the testicles, yet there are few organs or tissues of the body which may not become the seat of this truly malignant disease; thus we find it sometimes seizing on the brain, the eye, the lip, the cheek, the nose, or the tongue, and it may perhaps have made considerable progress before its presence is suspected, coming like a mere pimple or hardening of the skin. Those attacked by it are mostly beyond thirty years of age, and are frequently persons of a scrofulous habit; there can be no doubt that it sometimes proceeds from hereditary taint; that it has been produced by contact, although it can scarcely be called a contagious disease. It may be excited into activity by the sudden application of cold, or by a blow, or by great anxiety, or trouble of mind. Some irritating substances seem to have the power of producing it; soot certainly does, hence the prevalence in sweeps of *Cancer of the Scrotum*, of which we shall presently speak more fully. Women are more subject to it than men, and married more than single women; statistics completely refuting the theory that celibacy favours the developement of the disease, which most usually takes place about the time when the menstrual discharge ceases, as though the healthy balance of the system had been hitherto kept up by this periodic discharge, and was now destroyed.

With regard to the often mooted question, is Cancer curable? although quacks and empirics may declare that it is, true science makes no such positive assertion. Quackery says,—it can be cured without the knife; but this we do not believe, and so rarely with, that the exception but strengthens the rule. Are palliative measures then all that should be resorted to? our readers would ask: nay, there is a chance of preserving life, which is dear to all, for some years at all events; therefore, if circumstances admit of it, and the patient is desirous that it should be so, let the trial be made, and made as it only can be, by the aid of the highest surgical skill.

Considerable difference of opinion exists as to the *treatment* of persons suffering under this disease; while some would keep them on a diet barely sufficient to support life, others, among whom is Sir Astley Cooper, say that a good nourishing diet is required; and this would seem to be the more rational course, certainly so in the later stages, when the free discharge and constant pain wear out the strength and reduce the system; stimulants, of course, must be avoided as much as possible, especially, those of an alcoholic nature. The above authority does not believe in the possibility of curing scirrhous cancer, all applications and medicines he considers therefore as merely palliatives, and this is the view taken of them by most really scientific men. It will be evident, therefore, that the avoidance of all which may tend to excite the disease to activity is a paramount object, for the attainment of which, perfect rest of body and mind, as far as this is compatible with a due performance of the functions of vitality, should be enjoined; the biliary and other secretions are to be carefully watched, and such medicines administered as may be necessary to keep them in a healthy state. Gentle aperients should be occasionally given, and those of an alterative nature are to be preferred; such as 5 grains of Plummer's Pill, at bedtime and a Rhubarb draught in the morning; drastic purgatives, such as Jalap, Scammony, &c., are to be avoided, and also, as a general rule, salines. With regard to local applications, in the earlier stages, trial may be made of Iodine rubbed in in the form of ointment, which has, on some few occasions, been found capable of dispersing hard swellings supposed to be cancerous; a plaister composed of Mercury and Ammoniacum has also been recommended; stimulating applications are decidedly objectionable, although they are sometimes used. When the tumour has passed into the soft state, or the sharp shooting pains have commenced, it is time to begin the administration of sedatives; Hemlock is that generally recommended; the soft extract given as pills in 5 grain doses, or the Insissipated juice, ½ a drachm, or the powdered leaves, from 3 to 10 grains; this, or Henbane, or the two in combination are serviceable, both internally and applied as poultices. Opium in its several forms is also given, but it has a tendency to confine the bowels; Belladonna and Stramonium, too, may be tried should the above not have the desired effect, but it should be only under the direction of a medical man. Bichloride of Mercury given in combination with Tincture of Bark, Decoction of the same, or of Sarsaparilla, is sometimes administered; of the latter named root, the Extract or Decoction is a favourite remedy. Gentian, and Quinine, and the various preparations of Iron, Iodide of Potassium, Cod-liver Oil, Infusion of Malt, the mineral acids, especially Nitric, and Arsenic, in the form of Fowler's Solution, have all their advocates, and all their peculiar advantages depending upon constitutional and other differences. Some use the Phosphate of Iron, made into a paste with water, as a local application; or a solution of the Muriated Tincture of Iron; some Arsenical Ointment; some evaporating Spirit Lotions; some Lime-water and Linseed Oil; and some warm poultices. But again says Sir Astley Cooper, "it is all nought; cold or hot, they are alike useless; the best dressing for the ulceration is prepared thus: — 1 ounce of Soap Cerate, 1 drachm of Extract of Belladonna, melt and mix;" if there is much inflammation, he does not object to the use of leeches. When the discharge is offensive, add a little Solution of Chloride of Lime, or Soda, to the lotion. We need scarcely enlarge upon the absolute necessity for extreme cleanliness; the wound when it is discharging must be frequently dressed, a d the patient's linen often changed, or the fetor will become intolerable.

In some cases of scirrhous Cancer, pressure has been applied with a certain amount of success; shields of sheet-lead of various thickness, or tin plates, have been placed over the tumour, over these, strips of adhesive plaster, and then linen compresses and roller bandages; in open Cancer, the wound has been filled with powdered chalk, and thickly dusted with starch powder, covering the more irritable surface with gold-beaters skin. In this mode of treatment, care is taken to have the plaster and bandages evenly applied, and the cavities so filled up that pressure on the part be firm and even, without partial stricture. But we might fill a volume were we to enter fully into all the various modes of treating Cancers, the real or pretended remedies for which, are indeed too numerous to mention; a qualified practitioner only can judge of the means best adapted for particular cases.

If the Cancer be in the womb, a horizontal position should be maintained; the lotions can only be applied as injections, and no dressing on the immediate seat of the disease is possible, although a solution of Iodine, or other preparation, may be applied, by means of a camel-hair brush; leeches to the loins and groins may be applied if there is much inflamation, the warm hip-bath used daily, and opiate lavements administered, with a suppository at night. There should be abstinence from sexual intercourse, and perfect quiet. If the cancerous ulceration be on the tongue, it should be brushed over several times a day with a camel-hair pencil dipped in the following composition: Borax and Hemlock powdered, of each 1 drachm; Honey, 1 ounce; it is well also to apply to the surface once a day, or so, a brush dipped in Muriated Tincture of Iron.

When the ulceration is on the face, the same applications may be used, or Arsenical Solution of Potash, or Lime-water with Calomel—the Black Wash as it is called. In this situation, Cancer is sometimes confounded with *Lupus*, (which see); but whereas the former at its commencement is hard and colourless, the latter is soft and of a bright red colour; the cancerous tubercle, too, is single, but in *lupus* there are usually two or more spots.

An operation for Cancer should be performed in the indolent stage of the tumour; that is, while it is hard and moveable, before it has become attached to the surrounding tissues, from which it will be difficult if not impossible to extirpate it, when the disease has passed into the ulcerated state, and the absorbent glands have become affected. In operating thus, in the early period of the disease, there is a chance that the whole of the tumour may be removed, especially, as is recommended, if a considerable portion of the healthy substance be cut away with it; but it generally happens that the patient's mind is not made up until the symptoms become really alarming, and the suffering great. Then, when the operation is performed, the parts may unite, the wound may heal, and all for a time appear to go on well; but sooner or later the disease will be pretty sure to show itself again, and this time its progress will be more rapid than at first.

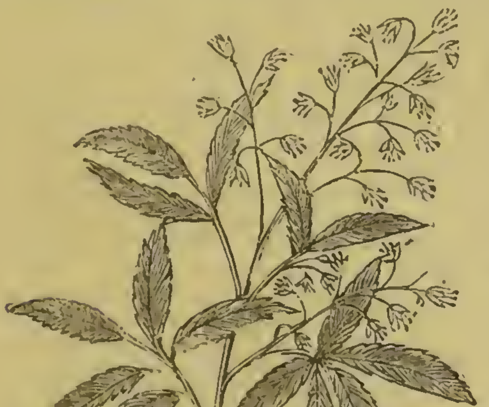
We have spoken of what surgeons call *Cancer Scroti*, Cancer of the Scrotum, or Chimney Sweep's Cancer, which is supposed to be produced by the irritation of the soot on the delicate lining membrane of the *Scrotum*, (which see). As in the other forms of scirrhous, there is first an indurated enlargement of the integuments, which may remain for a long time without any apparent increase, and will then start into activity, suddenly going off into an ulceration, extending over the whole of the scrotum, and finally passing into the peritoneum, and probably entending thence to the testes, and the glands of the groin. Local application may sooth the pain, and destroy the fetor of the discharge, and medicines, such as we have already mentioned, may mitigate the violence of the symptoms, and support the system for awhile; but nothing will stay the progress of the disease, which must eventually prove fatal, if an early recourse is not had to the knife, which after all may not effect the desired object.

Canella Bark (Latin *Cortex Canellæ*; sometimes called the Wild Cinnamon.) The inner bark of the young branches of the *Canella alba* (White Canella), a plant of the natural order *Meliaceæ*, has aromatic and tonic properties, and is sometimes used as a spice; the dose of the Powder is from 15 to 20 grains. In combination with Aloes it forms what was at one time a favourite stomachic purgative, called *Hiera Picra* (which see).

Canine Teeth (from the Latin *Canis*, a dog). The four teeth, two on each side, which immediately adjoin the incisors; they are sometimes called the Eye teeth, or *Cuspidatæ* (which see), also *Teeth*.

Canker (Latin *Cancrum oris*, canker of the mouth). This is a gangrenous inflammation which chiefly affects the cheeks and gums of children of a weakly scrofulous habit, with constitutions debilitated by want of wholesome food, impure air, and all the bad influences of poverty and wretchedness, which surround so many of the poorer classes. Very frequently the disease shows itself soon after measles, scarlet fever, or other acute inflammatory affections. Its first symptom is usually a hard red spot on the cheek, which spreads and opens into a shallow ulcer on the inside, discharging matter of a peculiarly offensive character. As the disease progresses, the cheek swells, the breath becomes fœtid, there is a great flow of saliva, which is often tinged with blood, there is mortification of the surrounding parts, including the gums, the teeth drop out, typhoid symptoms show themselves, and, finally, the patient sinks exhausted, death coming like a happy release from its sufferings. This is the usual course, if early efforts are not made to arrest the progress of the disease. As soon as the red spot in the cheek gives warning of its commencement, the constitution should be strengthened with good nourishing diet, such as Beef Tea, Milk, and Eggs, if the stomach will bear them; Wine if there is extreme debility, and no great amount of fever. Quinine in ½ grain doses three times a day, in Infusion of Gentian, or Decoction of Bark, may be given, or some preparation of Iron with a warm stomachic; the following mixture is perhaps as good as any—Wine of Iron, 2 drachms; Compound Tincture of Cardamums, or of Valerian, 2 drachms, made up to 8 ounces with Cinnamon or Mint Water. one or two tablespoonsful twice or thrice a day. Change of air, sea bathing, and anything which is likely to invigorate the constitution should also be tried. Chlorate of Potash, 1 drachm, with 20 drops of Muriatic Acid, in six ounces of Water sweetened with a little syrup of Orange Peel is a pleasant and serviceable mixture; it may be given to a child six years of age, a tablespoonful about every four hours. For local treatment, Lunar Caustic, or Sulphate of Copper, rubbed along the edges of the wound are recommended. The mouth should be frequently washed with a lotion made of Chloride of Soda and Water, in the proportion of 2 drachms of the former to ½ a pint of the latter; or it may be, 1 drachm of Chloric Ether to the same quantity; by this means the unpleasant fœtor is diminished so as to be endurable. When extensive ulceration and sloughing takes place outwardly, poultices must be applied. Canker may be produced by the contact of copper or brass with the inside of the mouth; it is very often attributed to mercury, but this can only, when given in large doses, contribute to its development. See *Gangrene*, *Mortification*, *Mouth*.

CANNABIS INDICA, (Latin for Indian Hemp). This is no doubt the same species as the *Cannabis sativa* of botanists; but, growing in hotter climates it secretes a resin, and has medical properties which its European congener possesses not at all, or in an inferior degree. It is narcotic, anodyne, and antispasmodic, and produces a peculiar kind of delirium and catalepsy. In neuralgia and painful rheumatic affections, tetanus and hydrophobia, it has been recommended, and with some success, more so in the East than in our Northern clime. The resinous Extract is that which is principally employed, the dose being from 2 to 10 grains; of the Tincture from 15 minims to a drachm or more is given, the larger quantity every half hour in tetanus; of the active principle, *Cannabine*, ½ a grain to a grain; a medium dose has acted as a powerful narcotic. Of the common European Hemp, the seeds are the only parts used; they are chiefly given in chronic inflammation of the mucous membranes, and also in jaundice.



CANTHARIDES (Greek *cantharis*, a beetle). The Blistering or Spanish Fly; (see *Blisters*, *Lyttæ*). Not only is this insect of the beetle tribe, much used as a blistering agent, but it is also given internally, acting chiefly as a stimulant of the urinary organs; it has been found especially useful in obstinate gleet, paralysis of the bladder, and as a diuretic in atonic dropsy, as well as in some diseases of the skin, such as *Lepra* and *Psoriasis* (which see). It should, however, be administered with great caution, as an overdose will very likely produce *Stranguary* (which see), and set up inflammatory action which may lead to fatal results. The best remedies are clysters of Starch and Linseed Tea, with or without Laudanum, Milk, Emulsions of Acacia, and other demulcent drinks; bleeding if there is much fever, warm baths, and aperients and nauseating medicines. Camphor has been highly recommended in a case of this sort, but we question its efficacy; Calomel may be given with advantage in small and frequent doses. Besides the blistering preparations, such as ointments and plaisters already spoken of, there is a Cantharides Liniment and other compounds, used as stimulants and rubefacients.

CANTON'S PHOSPHORUS. This is a substance made by exposing calcined oyster shells and sulphur to a red heat; it is properly a sulphuret of *Lime*, which see.

CAOUTCHOUC. An elastic gum being the concrete juice of the *Hœvea Caoutchouc* and several other plants. See *Indian Rubber*.

CAPELINA (French *capeline*, a woman's hat). A kind of double-headed roller used to bandage the head. See *Bandages*, *Rollers*.

CAPILLARY (Latin, *capillus* a hair). A term applied, 1st. to the vessels which pass between the minute veins and arteries; 2nd., to a small crack or fissure (*capillatio*) in the skull; 3rd., to tubes so small as to be likened to hairs, being less than the 20th of an inch in diameter; 4th, to the attraction by which a liquid rises in a *capillary* tube higher than the fluid which surrounds it.

CAPILLUS. The hair in general. See *Hair*.

CAPISTRUM (Latin for a bridle). The single split cloth bandage used to support the lower jaw, so called from its resemblance to a bridle. See *Bandages*.

CAPSICUMS. The pungent berries of the *Capsicum fustigratum*, and some other species of plants of the natural order *Solanaceæ*, are employed medicinally; they are powerfully stimulant, and are useful in atony of the stomach, and the dyspepsia of gouty and debilitated subjects. They are taken also with a vegetable diet to prevent flatulency, and may be recommended for gargles in malignant sore throats, and relaxed states of the uvula and other organs of that part, as well as in chronic hoarseness. The dose of the Powder is from 2 to 8 grains; of the Tincture from 10 to 60 minims; there is a concentrated Tincture good as an external stimulant for chilblains, and a Capsicum Lozenge, of which one may be put into the mouth and allowed slowly to dissolve, about three times a day. Persons who are subject to cold feet are sometimes recommended to wear socks dusted with *Cayenne Pepper*, which is a mixture of the dried pods of several species of Capsicums, but more especially of the *Capsicum baccatum* (Bird Pepper); there is commonly Muriate of Soda (Common Salt) mixed with this, and some colouring matter not always of an innocent nature, Red Lead having been detected in the composition; if the presence of this poisonous ingredient be suspected, boil some of the powder in Vinegar, filter the solution, and add to it a little Sulphuret of Soda, should lead be present, there will be a white precipitate, which, on being dried, exposed to heat, and mixed with charcoal, will yield a globule of the metal.

CAPSULE, (Latin *capsa* a chest). A membraneous bag which encloses any part; thus in surgery, we have the *Capsule of Glisson*, the fibrous envelope of the liver, and the *Capsular Ligament*, which contains the synovæ of the joints.

CAPUT, (Latin for the head). It includes, 1st, the *skull* or cranium, (which see), consisting of the following parts, the *vertex* from *verto* to turn, the crown; the *sinciput*, perhaps from *semi caput* half the head, the front part of the skull; the *occiput*, from *ob caput*, opposite to the former, the hind part; the *tempora*, or temples. 2nd, the face, (Latin *facies*) including the *forehead*, *eyes*, &c., all of which see. The term caput is also applied as follows, *C. coli*, the head of the colon—the cœcum or blind intestine; *C. gallinaginis*, (wood-cock's head), a small eminence in the urethra at the termination of the ductus ejaculatorius; *C. obstipum*, (stiff head), wry neck, (see *torti collis*); *C. papavaris*, capsules or heads of the Poppy, (which see.)

CARATTI. A species of Camphor, which exudes from the bark of a tree, is so called in South America. See *Camphor*.

CARBAZOTIC ACID. An acid formed by the action of Nitric Acid on Indigo, consisting of carbon and azote; its salts are called *Carbazotates*.

CARBO LIGNI (Latin for charcoal of wood). This substance, which is antiseptic and styptic, is used for a variety of purposes. See *Charcoal*.

CARBON (Latin *carbo*, a coal). This is the pure inflammable principle of *Charcoal* (which see): the diamond is Carbon in a state of absolute purity. Carbon forms a large proportion of all organic substances: it unites with Hydrogen to form *Carburetted Hydrogen Gas*; and with Oxygen to form *Carbonic Acid Gas*, which is always produced by the combustion of any material containing Carbon, in atmospheric air; or by the decomposition of Carbonates of Lime, Potash, Soda; or by an acid which has a stronger affinity for the base than it has for it—such as Lemon Juice, Citric, or Tartaric Acid; added to a solution of either of these Carbonates, a brisk effervescence ensues, which is caused by the liberated gas making its escape from the fluid. This gas is also given off by the lungs in the act of respiration; it is destructive of animal life when in excess, as in the foul air of wells, mines, and other close places—about lime kilns, and in confined spaces where charcoal is burned. It is a beautiful law of nature which maintains the equilibrium between animal and vegetable life; the former inhaling Oxygen and exhaling Carbon; while the latter absorbs the first of these atmospheric constituents, and gives out the last. A knowledge of this law has lately been turned to account in the formation of Aquaria, wherein the purity of the medium is preserved by a due arrangement of the living animals and vegetables placed therein. It is of Carbon that the substance of all vegetation is mainly composed, and it enters largely into the more solid tissues of the animal frame, besides subserving some of the most important functions of life. It is believed that this element, in its combination with oxygen, inhaled by the lungs, is the medium by which the animal temperature is maintained; hence the necessity for keeping up the supply of such nutriment as will furnish it in sufficient quantity. We may notice that in long illnesses, when patients are unable to take this, the temperature of the body becomes greatly reduced; and if soups, jellies, wines, and other carbon-supplying food be not given, death, from extreme cold, will ensue. So we find, in the frigid north, that the food consists chiefly of animal fats and oils—while, in tropical countries, it is watery fruits and grains.

CARBONIC ACID GAS. We have already spoken of this as the deleterious air, the inhalation of which has been so frequently attended with fatal consequences. Its composition is about one part of carbon to two of oxygen; it is therefore heavier than common air, and has a tendency to sink and collect in the lower parts of wells, holds of ships, brewers' vats, and mines, where it is commonly known as "choke damp," because it causes suffocation by closure of the windpipe, the result of a spasmodic action, or involuntary effort of nature, to resist the entrance of that which would prove injurious. The gas may be sufficiently diluted with air to be admitted into the lungs, and yet prove not the less poisonous; this is the case with the fumes from a stove in which charcoal is burned, the person inhaling it falls into a stupor; and the respiration, which is for a time laboured, ere long ceases altogether. Before death, there may probably be convulsions and frothing at the mouth—the countenance becomes pale and livid, and the muscular fibres of the body are relaxed; so that there is no rigidity, nor constraint, in the position assumed. The first thing to be done on the discovery of such an accident is to dash buckets of cold water, into the place, and over the person of the apparent sleeper. If newly-slacked lime can readily be procured, let this be mixed with the water, or scattered around the body in a dry state. Lighted bundles of some combustible material should be introduced, to cause currents of air, and so dispel the noxious vapours. Not until the unextinguished flame of a candle betokens that the proportion of oxygen is in some degree restored, should any one venture in to attempt a rescue; and then it should be with a cloth over the mouth, saturated with Lime-water, or a solution of Caustic Potash; or, if these cannot be procured, simple Water will be some protection. Get the body into the fresh air as soon as possible—dash water freely over it; then use friction with coarse towels or flesh brushes; apply hot flannels or bran-bags to the surface of the skin, and stimulating liniments to the chest and spine; glysters of warm gruel, containing each about a drachm of Spirits of Turpentine, should also be thrown up, and strong Liquor of Ammonia held to the nostrils, while efforts should be made to bring the lungs into play, by alternately compressing and relaxing the chest, and forcing breath into the mouth, or up the nostrils. If these measures are effectual, and the patient shows symptoms of a return to life and consciousness, let him be placed in warm blankets before a fire, and as soon as he can swallow, administer a tablespoonful of brandy, repeating it every half-hour until it is no longer necessary.

It sometimes happens that fluids taken into the stomach in a state of fermentation, generate Carbonic Acid Gas in such quantities that it passes into the lungs and causes, or threatens, suffocation. In this case, nothing is so effectual as Ammonia, which should be both inhaled and taken into the stomach. This gas is used to a considerable extent in medical practice; many mineral waters contain it naturally, and to its presence, Soda Water and other effervescent drinks owe their freshness and agreeable effect. In obstinate cases of vomiting, it is often given with a truly marvellous effect, acting both as a sedative and stimulant. See *Effervescing Drinks*.

CARBUNCLE (Latin *carbo*, a burning coal). The carbuncle differs from the boil, in having no central core, and in terminating in gangrene under the skin instead of suppuration. Abernethy defines it as "an inflammation attacking a particular structure;" and Lawrence says that "it is essentially the same affection as the boil, only differing in magnitude and in its situation;"

this is usually the back of the neck, or the shoulders, in the interval between them, or the loins; a very common situation for it is immediately below the occiput, on the very top of the neck where the integument is thickest.

The *causes* of carbuncle are essentially similar to those of *boils* (which see); external irritation of some kind is generally the immediate cause; although there must also be a predisposition to carbuncular inflammation, arising from a particular state and condition of the system, generally an excess of fibrin, or inflammatory matter, in the blood.

The first *symptom* of the disease is pain, followed by a hard red swelling; very soon the surface of the tumour assumes a livid tint, and a soft spongy feel; small ulcers form on the skin, and, from their numerous orifices, which give the surface a sieve-like appearance, flows out a thin pasty discharge, which is characteristic of the disease. These openings quickly break into one, and then the discharge thickens as the dead cellular tissue begins to escape; to enable this to do so freely, an incision down to the very base of the tumour is made, and then crossed by another; the hœmorrhage attendant on this is commonly very considerable, as well as beneficial, in reducing the inflammation. Such is the mode of *treatment* usually adopted in carbuncle; warm bread or linseed-meal poultices are applied, both before and after the cutting; and, if the bleeding is excessive, Port Wine or decoction of Oak Bark, with a little spirit, may be used to moisten them. The poulticing should be changed about every eight hours, and continued until the morbid matter is all discharged, and the wound is nearly filled with healthy granulations; when these have risen to the level of the surrounding skin, the wound may be dressed with the ointment of Nitric Oxide of Mercury, or Red Precipitate ointment, as it is more commonly called. The constitutional treatment in this case should first be of an antiphlogistic kind; aperient, and febrifuge medicines, and low diet; but as soon as the carbuncle has been opened, and the discharge become copious, the patient's vigour must be sustained by good Beef-tea, Wine and other nourishing condiments. Sometimes there is great prostration of strength, and as much stimulant is required as in typhus fever; Bark, Opium, and Ammonia are commonly given to relieve the pain and arouse the nervous system. Persons of a full habit of body are those most subject to carbuncles, which are frequently fatal if they are situated high up in the neck, because they are usually attended with inflammation of the membranes of the brain. When on the back or loins, although frequently of enormous size, they are not so dangerous. Sir Astley Cooper has remarked, that he never saw a patient who recovered from carbuncle on the head; in such cases, there being always effusions between the *tunica arachnoides* and *pia mater* (see *Anthrax*).

CARBURETTED HYDROGEN GAS. This is the gas which is commonly used for illuminating purposes; it is a combination of *carbon* and *hydrogen* (which see), and is highly combustible and explosive; it is the "fire-damp" of the mines, to guard against which Davy planned his safety lamp. Lamentable accidents have resulted from a want of proper precaution in dealing with this useful but dangerous vapour; when inhaled in considerable quantities, it is as poisonous as the carbonic acid, and requires the same remedies. See *Gas*.

CARDAMUM. The *Elettaria Cardamomum*, a plant of the natural order *Zingiberaceæ*, produces seeds which are highly aromatic, stimulant and carminative, without having such heating properties as many other spices; they are given with other stimulants,

bitter tonics, and purgatives. Dose of the Powdered seeds from 5 to 20 grains; Tincture from 1 to 2 drachms. The small black seeds, which are enclosed in a whitish husk, are sometimes mixed with grains of Paradise, which are more biting and pungent, but less aromatic in their flavour. The plant which produces them is sometimes called *Matonia*, after Dr. Maton, who first used it medicinally in this country.

CARDIA (Greek *kardia*, the heart). The entrance into the stomach is so termed by anatomists, because it lies near the *heart* (which see). From the same root, come also the words, *Cardiacs*, cordial medicines; *Cardialgia*, pain in the stomach (see *Heartburn*), which has also been called *Cardiaca passio*; and *Carditis*, inflammation of the heart.

CAREX ARENARIA. A species of rush, sometimes called the German *Sarsaparilla* (which see).

CARIES (Greek *keiro*, to abrade). Ulceration of the *Bones* (which see).

CARMINATIVES (Latin *carmen*, a song or charm). A class of remedies which allay pain and dispel flatulency in the stomach or bowels; this they effect by stimulating the muscular coat of these organs. The principal carminatives are Aniseeds, dose 10 grains to a drachm; Caraway seeds, 10 grains to a drachm; Cardamum seeds, 5 grains to a scruple; Coriander seeds, a scruple to a drachm; Cumin seeds, a scruple to a drachm; Dill root and seeds, 10 grains to a drachm; Ginger root, a scruple to a drachm; Grains of Paradise, a scruple to a drachm; Lemon peel, Infusion of, ½ an ounce to 2 ounces; Mastic, 10 to 30 grains; Orange peel, a scruple to a drachm; Peppermint and Spearmint waters, *ad libitum;* Oils of the same, 2 to 4 drops; Powder of Cinnamon, simple and compound, 5 to 20 grains.

CARICA PAPAYA. The Papaw Tree, of South America, which shoots up a small trunk from 12 to 20 feet high, and abounds in a milky juice, which is used as a cosmetic and vermifuge. The fruit is eaten ripe, and when unripe is boiled as a vegetable; and the leaves are used as a substitute for soap in washing.

CARO (Latin *carnis* flesh). Hence we have *Carneæ columnæ*, the fleshy columns, or muscular fasciculi, within the cavities of the heart; hence also *Carnivora* and *Carnosa*, flesh eating, and fleshy animals; the latter term being applied to a class of the sea *Polypi.*

CAROTID (Greek *karoo* to induce sleep). A name given to a large artery, under the impression that tying it would induce coma. This is one of the main arteries of the system, it passes up the neck where it is called the Common Carotid; then, opposite the angle of the jaw, it divides into two branches, called the External Carotid and Internal Carotid, the former supplying the face, jaws, &c., and the latter the brain and eyes. (See *Arteries*). Increase of pulsation in the carotid is a symptom of chronic determination of blood to the head, of acute inflammation of the brain, of delirium tremens, or of strong febrile action in the system: being near the surface this is one of the arteries most liable to accidents; when the throat is cut by a determined suicide, or a murderer, this is generally severed, and there is little hope of life left when it is so. See *Aneurism*, *Arteriomoty*.

Carpus (Greek *karpos* the *wrist*), which see.

Carraway Seeds (Latin *Carui Semina*). The produce of the *Carum Carui;* natural order *Umbelliferæ;* stimulant and carminative, used chiefly in flatulent disorders of children, and with purgatives to prevent griping; the Oil contains the active principle and is chiefly used, dose from 2 to 8 drops rubbed down with sugar and mixed with water. In this way the Carraway Water of the shops is usually prepared, and sometimes by distillation from the seeds; the dose of this is from ½ an ounce to 2 or 3 ounces; of the spirit from 1 to 2 drachms. For children, the water is much to be preferred

Carrageen Moss (sometimes called Irish or Pearl Moss). Is a sea-weed whose scientific name is *Chondrus, or Fucus crispus;* it yields, on boiling, a vegetable jelly, which is nutritive and demulcent, and may be recommended for consumptive persons and those troubled with catarrh. Sweetened and flavoured with Lemons, or Spice, it makes an agreeable article of diet. It is given medicinally in pulmonary and catarrhal diseases, as above indicated; and also in hœmoptysis, irritations of the bladder and kidneys, diarrahœa, and dysentery. It may be prepared thus:—One ounce of the Moss, previously soaked for a quarter of an hour in cold water, to be boiled in a pint and a-half of water until dissolved; then strained and flavoured: it should be given fresh. For dietary purposes, it is sometimes boiled in milk.

Carrara Water, very useful in some cases of Dyspepsia; is an artificially-prepared effervescing drink, holding Carbonate of Lime in solution, by means of an excess of Carbonic Acid.

Carron Water. Was so called because it was first employed at the Carron Iron Works, Scotland; is a mixture of Linseed Oil and Lime-water, in equal proportions. It has long been a popular application for *Burns* (which see).

Carrot. Several varieties of this well-known root are cultivated in this country; containing a considerable portion of saccharine matter, they are somewhat indigestible, and,are unfit for weak stomachs. To make them at all wholesome, they should be well boiled. Of the Wild Carrot *(Dorcus sylvestris)*, a common wayside plant, the seed was formerly used as a diuretic and aromatic, but it is seldom so now. The fresh root of either, wild or cultivated, when scraped, forms a good poultice for foul, ill-conditioned Ulcers.

Cartilage (Latin *cartilago*). A smooth and solid body softer than bone, but harder than a ligament, commonly called *gristle*. The cartilages of the human frame are distinguished generally as — 1st. *Articular*, which cover the surface of the bones in the moveable joints; 2nd. *Inter-articular*, which occur between the ends of bones, as that which covers each condyle of the jaw; 3rd. *Connecting*, which connect the articular surfaces of bones, as the true ribs to the sternum, the bones of the skull, &c.; 4th, of *Cavities*, such as form the larynx, trachea, part of the nose, &c. There are also particular distinctions which have regard to shape, such as *Arytœnoid*, *Cricoid*, *Thyroid*, *Xyphoid*, like au ewer, a ring, a shield, a sword.

Caruncle (Latin *caro*, flesh). A little piece of flesh; hence the terms *C. lacrymalis*, (Latin *lacryma*, a tear), the small red substance situated on the inner angle of the eye; and *C. myrtiformis* (Latin *myrtus*, a myrtle); the remains of the lacerated *hymen* (which see).

Carus (Greek *kara*, the head). Profound sleep, *Lethargy*, (which see).

Caseic Acid (Latin *caseus*, cheese). A substance extracted from cheese; its salts are called *Caseates;* and the curd of milk, made by means of rennet, which is the basis of cheese in a state of purity, is called *Caseus matter*.

Cascarilla. The bark of the *Croton eleuteria*, of the natural order *Euphorbiaceæ*, commonly prescribed as an aromatic bitter tonic in dyspepsia, dysentery, flatulent colic, and general debility. The Infusion is a good vehicle for several preparations of Iron, Bismuth, and other metallic tonics: the dose is from 1 to 2 ounces; that of the Powder from 20 to 30 grains; of the Tincture from 1 to 3 drachms; of the Mixture (*Mistura Cascarillæ Comp.*) from 1 to 1½ ounces; the latter formula is a good medicine for chronic affections of the mucous membrane of the lungs. Abernethy recommends the following Mixture, a wine-glass full an hour or two before, and two hours after dinner, to dyspeptic persons:— Infusion of Cascarilla, 7 ounces; Bicarbonate of Soda, 3 drachms; Tincture of Cardamums, 6 drachms; if more stimulant is required, add Tincture of Ginger, 4 drachms.

Cassava. A starch-like substance, obtained from the root of the *Iatropha manihot*, belonging to the natural order *Euphorbiaceæ;* for uses and qualities of this substance see *Tapioca*.

Cassia. This is the generic name of several plants used medicinally, and belonging to the natural order *Leguminoseæ*, such as *Cassia Lanceolata*, *Marilandica*, and *Obovata*, the Indian, American, and Aleppo *Senna* (which see); also *C. Fistula*, or Purging Cassia, the insides of whose pods yields a soft black pulp, used as a laxative, and said to form the basis of the so-called Essence of Coffee. But that to which the name is most commonly applied is the *Cassia Cinnamomum*, whose bark, possessing the same properties, is used for the same purposes as *Cinnamon* (which see).

Castile Soap (Latin *Saponis Castile*). This is generally esteemed one of the finest kinds of soap, and is therefore used medicinally, for making pills, plasters, &c.; for cleansing diseased skin, washing sore heads, &c.; it is composed of Soda and Olive Oil, and may be had either white or mottled, the former being preferable. See *Soap*.

Castor (Greek *gastor*, a big-bellied animal). This is an oily substance secreted by the beaver (*Castor fiber*) in a bag near the rectum; it is a nervous stimulant, antispasmodic and emmenagogue, and is useful in several nervous affections, especially when connected with uterine irregularity; we obtain it from both America and Russia, but that from the latter country is much the best. Dose of the Powder from 10 to 20 grains; of the Tincture from 1 to 2 drachms. Chemists have extracted its active principle, which they have called *Castorine*, but it has not come much into use.

Castor Oil (Latin *Oleum ricini*). This well known purgative is expressed from the seeds of the *Ricinus Communis*, or *Palma Christi*, a plant of the natural order *Euphorbiaceæ*, found in the East and West Indies. One peculiarity of the Oil is that it dissolves in its own volume of alcohol; it is the mildest, safest, and most certain cathartic known, seldom griping, or causing flatulency; it may therefore be administered in irritable conditions of the system to persons suffering from debility, and young children; after childbirth, in operations for lithotomy, in peritonitis, dysentery, and where there is inflammatory disease of the urinary organs. With most purgatives, the immediate effect is followed by a constipating tendency; it is not so with Castor Oil, the dose of which, after repetition, may be generally decreased; the usual quantity required, is for children from 1 to 2 drachms; for adults from 1 to 1½ ounces: the best vehicles for its exhibition are Tea, Coffee, Gruel, Barley water, Spirits and water, or Peppermint or some other aromatic water; those, to whom its oily flavour is especially nauseous, will do well to chew a piece of fresh orange or lemon peel just previously to taking it: this renders less acute the nerves of taste. It is sometimes made into an Emulsion as follows:—Put into a clean mortar the yolk of an egg, add to this 6 drachms of Castor Oil, and well mix by trituration; then add gradually, to the extent of 6 ounces, Cinnamon, or some other aromatic water. The mixture has the appearance of rich cream or custard; the dose is about an ounce, that is, two tablespoonsful. Exceptional cases sometimes occur of stomachs that will not retain the oil, disguise it how you may; and on some it acts like a drastic purgative, causing intolerable pain, or a deadly faintness during its operation; such persons should avoid taking it.

The term Cold Drawn Castor Oil, which commonly appears on the druggists' labels, refers to the mode of expressing it from the seeds between cold, instead of hot plates, as it was formerly prepared; drawn in this way, the oil is clearer, purer, and less likely to become rancid by keeping. If good, it is without smell and almost colourless; although thick, so that it flows from the bottle slowly, yet it is lighter than any watery vehicle, on which it will float in a body, and so go easily down the throat at a gulp; when it has become of a light brown, or dark yellow colour, and has a hot nauseous taste, it is rancid, or badly prepared, and is unfit to take.

Castration (Latin *castro*, to emasculate). The operation of removing the *Testes* (which see).

Catalepsy (Greek *kata* or *kath* against, down, or into, and *lambano* to seize). A spasmodic seizure, which causes a rigidity of the limbs, retaining them in a certain position, however inconvenient or painful.

The *causes* of this disease are seldom local, but such as affect the whole system; catamenia, worms, and painful emotions of the mind, or impaired digestion, may be mentioned as among the most frequent: women are more subject to these attacks than men; and, sometimes, they result in apoplexy, epilepsy, or melancholia. The *symptoms* are a sudden deprivation of all power of motion and sensation; the patient remaining in precisely the same position as he was when seized: the attack comes on suddenly, without any warning, except, it may, bo a slight languor of body and mind, and lasts for several minutes, or perhaps hours, although the longer period is rare; if, during the fit the position of the limbs is altered, they will remain as placed, and when the paroxysm is over, there will generally be no consciousness of what has transpired while it lasted; in this respect it resembles the mesmeric sleep, or the state of insensibility produced by the inhalation of ether or chloroform.

The *treatment* must depend upon the probable cause; if the patient is of a plethoric habit, cupping at the back of the neck, blisters, a seton or a issue, with the administration of cathartics; if debilitated, tonics and antispasmodics must be given. During the attack apply mustard cataplasms to the palms of the hands, and soles of the feet, pit of the stomach and spine; cold water may dashed in the face, if the fit continue long, and strong Ammonia applied to the nostrils; a mixture of Ether, Fœtid Spirits of Ammonia, and Tincture of Musk, 2 drachms of each to 8 ounces of Peppermint Water, should be administered in ounce doses every quarter of an hour, or so. On recovery, the system should be strengthened as much as possible with good diet, gentle exercise, sea bathing, or the cold shower bath; Chalybeate waters may also be drunk with advantage, or preparations of Steel, bitter infusion, or Cascarilla with Aromatic Spirits of Ammonia.

Catamenia (Greek *kata* as above, and *men* a mouth). The monthly uterine discharge in females. See *Amenorrhœa*, *Menstruation*.

Cataplasm (Greek *kata*, and *plasso* to spread). See *Poultice*.

Cataract (Greek *kata*, and *arasso* to confound). A disease of the eyes causing opacity of the crystalline lens which prevents the passage of the rays of light, and so produces blindness.

The real *cause* of this disease does not appear to be well understood; it may proceed from external violence; but more commonly it has some internal and occult origin; it is of slow growth, and can only be operated on at a certain stage, when the opaque body in the pupil has assumed a sufficient density.

The *symptoms* of its formation are, a dimness and mistiness of vision, which may generally be noticed before any opacity can be perceived on the lens itself; then there are optical illusions, like specks or motes floating before the eye; this is succeeded by the gradual falling, as it were, of a curtain upon the outward view, which is finally obscured altogether. Sometimes the progress of the disease is slow and gradual, but frequently it is rapid, especially in the latter stages; persons who have passed the middle age are most likely to be affected by it, and sometimes it has made considerable progress in one eye before the patient is made aware of it by some accidental circumstance, which for a time prevents the use of the other.

The proper *treatment* is depletion, where it can be borne; cupping in the neck, blisters, or a seton; repeated doses of Calomel, with purgatives; poultices of fresh Hemlock leaves constantly applied to the eye, or the extract of Hemlock smeared around it, or a solution of the same dropped in. All remedies, however, generally fail, and the crystalline humour must be depressed or extracted; of course only a surgeon can attempt this operation; it is generally successful for a time, but very often the disease renews the attack after awhile. A Cataract may be either *firm* or *hard*, *milky* or *fluid*, *caseous* or *soft*; in the first case the opaque lens retains a tolerable degree of firmness; in the second the substance is converted into a whitish kind of fluid; and in the third, it has a jelly or curd-like consistence.

Cataract is distinguished from *gutta serena* by the presence of sensibility to light, and the obvious opacity in the crystalline lens, neither of which are symptoms of the latter disease; in which, as well as in *hypopyum*, *staphyloma*, and other diseases of the eye there is generally pain at the commencement. See *Eye*.

Catarrh (Greek *kata*, and *reo* to flow). Inflammation of the mucus membrane of the nostrils, or bronchial passages, causing an increased afflux of the matter secreted therein. There are two distinct kinds of this disease, viz., *Catarrhus a frigore*, cold in the head; and *C. a contagia*, epidemic catarrh, commonly called *Influenza* (which see).

The *causes* are exposure to cold or wet, epidemic poison, which, as the result of over stimulus to the nerves, produces congestion of some portion of the mucus membrane, and generally, more or less, of inflammatory fever in the whole system.

The *symptoms* are a dull, heavy pain in the forehead, redness of the eyes, fulness and heat of the nostrils, followed by the distillation of a thin acrid fluid from those parts; hoarseness, frequent sneezing, and soreness of the trachea; difficulty of breathing, cough, and loss of appetite, with a sense of chilliness, and a general feeling of lassitude: the pulse, towards evening, becomes considerably accelerated, and more or less of fever ensues as the disease proceeds; the mucus, at first, thin, colourless, and expectorated with difficulty, gradually becomes thicker, of a yellow colour, and more easily brought up; after a few days it diminishes in quantity, and soon ceases altogether, if proper care be taken, and the right remedies used; and this brings us to

The *treatment*, which will be low diet, plenty of diluents, such as Barley Water or thin Gruel, acidulated with a little Lemon Juice, or Cream of Tartar; if there is much difficulty of breathing, and much inflammation, bleeding, general or topical, must be resorted to, with diaphoretic and aperient medicines, and Calomel in 3 grain doses; a blister to the chest if the desired relief is not afforded by these means, and the promotion of perspiration by Dover's Powder, 10 grains, at bed-time; the use of the foot-bath, warm drinks, and plenty of clothes on the bed; an infusion of Linseed and Liquorice Root may be given where the cough is very troublesome, and the chest sore; and if the rest is much disturbed, a draught containing ¼th of a grain of Morphine, 2 drachms of Liquor of Acetate of Ammonia, and ½ a drachm of Ipecacuanha Wine, with an ounce of Camphor Mixture, should be administered at bed-time instead of the Dover's Powder. Catarrh in children may be distinguished from measles by the mildness of the febrile symptoms in the former, and the absence of many characteristic marks of the latter. The disease is seldom attended with fatal consequences, except in elderly persons, or those far advanced in pulmonary complaints, and greatly debilitated constitutions; it often proves the first stage of bronchitis, and commonly causes great constitutional derangement, and renders the system liable to the attacks of other diseases. Sometimes after it has continued on a person for a longer period than usual, the inflammation of the mucous membrane affects that of the *bladder* (which see).

CATECHU. Is a substance procured from the wood of the *Acacia Catechu*, a plant of the natural order *Leguminoseæ;* it has tonic and astringent properties, which render it valuable in diarrhœa, chronic dysentery, and passive hæmorrhages, especially those of the bowels or uterus; also in leucorrhœa, gleet, chronic catarrh, and all cases of increased mucous discharge without inflammation. In the composition of astringent gargles, and lotions for ulcered sore throat, ulceration of the mouth, chapped nipples, &c., it is employed with advantage: for the last named purpose the Tincture is generally used; of this the dose is from ½ a drachm to 2 drachms; of the Infusion, from 1 to 2 ounces; of the Powder from 10 to 30 grains; of the Electuary from 1 to 6 scruples. There is also a Catechu Lozenge, of which one may be taken several times a day for hoarseness; and a compound Powder, the dose of which is from ½ to 1½ drachms: mixed with Bark and Myrrh it makes a good *dentrifice*, (which see.) Catechu was formerly called *Terra Japonica*, or Japan Earth; it was then supposed to be a mineral instead of a vegetable production: the best kind is of a pale chocolate colour; it should be free from sticks and other impurities.

CATHARTICS (Greek *kathaizo*, to purge). These may be either *laxative*, *purgative*, or *drastic*, according to their power of accelerating, or increasing the evacuations from the bowels; we append a list of those most used, with their doses:—Aloes, from 5 to 15 grains; Buckthorn Berries, 1 to 2 drachms; Broom Tops, from 2 to 6 grains; Colocynth Powder, same dose; Elaterium (or Wild Cucumber), ½ to 3 grains; Gamboge, 5 to 20 grains; Hedge Hyssop, from 10 to 30 grains; Jalap, 10 to 25 grains; Scammony, same dose; Staves-acre, from 3 to 10 grains; Tobacco, ½ to 5 grains; Submuriate of Mercury (Calomel), 1 to 12 grains; Pulp of Cassia, 2 to 8 drachms; Castor Oil, ½ to 1 ounce; Rhubarb, 10 to 20 grains; Senna, 20 to 30 grains; Extract of Dandelion, 10 to 60 grains; Carbonate of Magnesia, ½ to 2 drachms; Sulphate of Magnesia (Epsom Salts), ½ to 2 ounces; Muriate of Soda (Common Salt), 10 to 6 grains; Tartrate of Potash, 2 to 8 drachms; Super-Tartrate (Cream of Tartar), 1 to 3 drachms; Sulphate, 1 to 2 drachms; Super-Sulphate (Polychrist Salt), 1 to 6 scruples; Potassio-Tartrate of Soda (Rochdale Salt), 1 to 4 drachms; Castile Soap, 1 to 2 drachms; Sea Water, ½ pint; Cheltenham, Epsom, Scarborough, and other waters (which see); also Officinal preparations, such as Decoctions, Infusions, Pills, Powders, Tinctures, &c., of the above.

Cathartine. This is an alkaloid, discovered in the pods and leaves of Senna, of which it is the active principle; it has not been yet much used medicinally (see *Senna*).

Catheter (*kathaito*, to thrust into). A tube which is introduced through the urethra into the bladder, in cases of stricture of the passage, when it is desirable to draw off the urine. The introduction of this instrument, which is best made of silver, always requires great care, and should not be attempted by one unacquainted with the anatomy of the parts, until he has been well instructed by his professional adviser; with some the passing of the Catheter becomes necessary at regular intervals, and it would be both expensive and inconvenient to have a medical man always to do it; after a while, too, it becomes easy for the patient to perform the operation himself. Catheters are of various kinds, both as regards make and material; some are of elastic gum—some of metal; they are thick or thin, according as the passage is more or less constructed—longer or shorter as required for male or female use; hence only a surgeon can judge of the right size or make. In some cases it is necessary to wear a Catheter continually; for such a purpose perhaps the elastic gum, lined with flexible metal, and provided with a stop-cock is best. See *Bougie*, *Stricture.*

Catholocon (Greek *kath* and *olos*, universal). A medicine good for any disease. See *Panacea.*

Catling. A sharp-pointed, double-edged knife, used chiefly in amputations of the fore arm and leg, for dividing the interosseous ligaments. See *Amputation*, *Knife*.

Catochus (Greek *katecho*, to detain). A muscular rigidity which detains the body in an erect position. See *Catalepsy.*

Cat's Purr. An unnatural sound of the *Heart* (which see), and *Auscultation.*

Cauda Equina (Latin for horse's tail). The final division of the spinal marrow; so called from the disposition of the nerves which issue from it. See *Hippuris.*

Caul. It sometimes happens, in childbirth, that a portion of the uterine membrane, covering the head of the infant like a cap, comes away with it, and this is termed the Caul; by ignorant and superstitious people it was, and still sometimes is, religiously preserved, and many occult virtues were attributed to it. This is also another name for the *Omentum* (which see).

Caustic (Greek *kaio* or *kauso*, to burn). A substance which destroys parts by chemical decomposition; from the same root, we have *Cautery*, the application of caustics, those most commonly employed being Lunar Caustic, or Nitrate of *Silver* (which see), and *Argentum;* Caustic Potash, the old name of which is *Lapis infernalis* (see *Potash*); and that which is called the Actual Cautery, viz., the application of iron at a red or white heat, or of some lighted inflammable substance to the part. Antimony, Arsenic, Copper, Lime, and the Mineral Acids are also sometimes employed for this purpose (see *Escharotics*).

A new form of actual cautery has recently been introduced by M. Bonnafonde, a French surgeon, it is thus prepared:—Dissolve 5 parts of Gum Tragacanth in a sufficiency of water, facilitating the solution by adding a little sugar, and rendering it as concentrated as possible. Then add gradually 15 parts of Vegetable Charcoal, and 2 of Nitrate of Potash, and thus form a homogenous paste capable of being rolled into cylinders of various sizes. These must be well dried, and when wanted for use may be lighted either by the candle or the fire. This preparation burns slowly, and is well adapted for the purpose where Cauterisation is not required to act very deeply, or to be made on a very wet surface. A mixture of the Gum and Charcoal without the Potash has been found to answer.

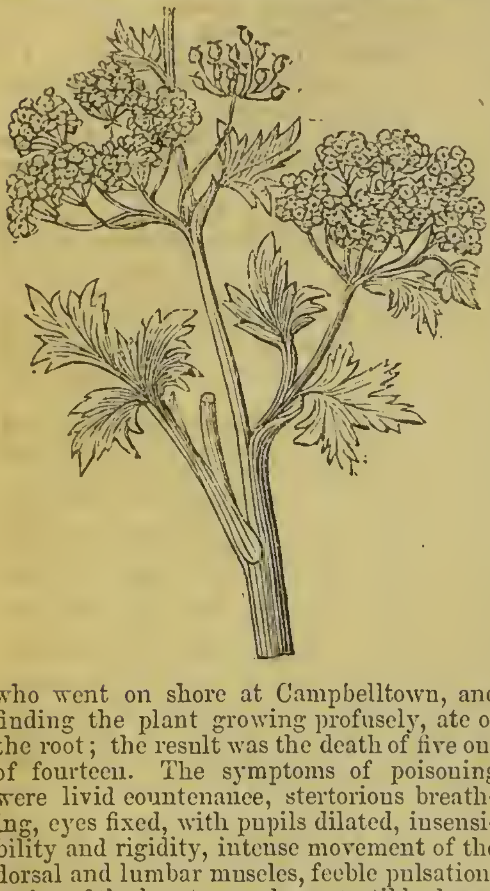
Cavernous (Latin *cavus*, hollow). The name of a ganglion on the head, and of two sinuses of the sphinoid bone.

Cavitaria (Latin *cavitus*, a cavity). Worms found in the cavities of the intestines. See *Worms.*

Cayenne Pepper. A mixture of the dried pods of several species of *Capsicum*, (which see) also *Pepper.*

Cedron. The seeds of the *Simaba Cedrus*, of the natural order *Simarabaceæ*, have obtained some celebrity as a remedy for hydrophobia and the bites of serpents; they are likewise given in intermittent fevers, cholic, spasmodic, and dyspeptic affections, and cholera. The ordinary dose is from 1 to 2 grains (in 20 or 30 grain doses it is poisonous); as an antidote for serpent bites, 5 grains in a tablespoonful of Brandy may be given at the time.

Celery. Under this generic name are included several species of umbelliferous plants, both wild and cultivated; one of these is the *Apina Graveolus*, common in this country, the seeds of which are used as a dieuretic in gravel: another species of wild Celery is the *Ænanthe Crocata*, the root of which is poisonous, as was unfortunately experienced by a boat's crew of Her Majesty's ship Wellington, in the year 1837, who went on shore at Campbelltown, and finding the plant growing profusely, ate of the root; the result was the death of five out of fourteen. The symptoms of poisoning were livid countenance, stertorious breathing, eyes fixed, with pupils dilated, insensibility and rigidity, intense movement of the dorsal and lumbar muscles, feeble pulsation, action of the heart scarcely perceptible, lower jaw firmly locked. In five of the cases, the spasmodic accessions were severe and frequent; in one the most prominent symptom was extreme restlessness, approaching to mania; in almost all, semi-delirium and jactation, if not convulsions; and in one or two, great prostration, requiring brandy and ammonia. In all the cases in which there were convulsions, opisthotonos was the form assumed.



Of the garden Celery, the best for salad is the Turkish: and for stewing, the Celerine, or turnip-rooted sorts; the seeds will do as well for flavouring soups, as the stems or leaves: a useful preparation for this purpose may be made by steeping one ounce of the bruised seeds in a quarter of a pint of Brandy or other spirit; a few drops will suffice to flavour a pint of soup or broth.

Celestrine. A name given to the Sulphate of *Strontia* (which see).

Cellula. Latin for a little cell or cavity, like those of the hyatoid membranes; from the same root comes *cellular*. The structure of the mastoid process of the lungs is so designated; and *cellular membrane* or *tissue* is the term applied to the filmy meshes which connect the minute component parts of most of the structures of the body. See *Membrane*, *Tissue*.

Centrum (Greek, *centro*, to prick). The middle point of any body or organ; hence *C. ovale* the appearance presented when the brain is cut horizontally on the level of the *corpus callosum*; *C. tendinosum*, the tendonous centre of the *diaphragm* (which see).

Cephalics (Greek *cephale*, the head). Remedies adopted for the cure of disorders in the head; they are commonly those which produce a discharge from the mucous membrane, such as the various *Snuffs* (which see); *Asarum Asarabacca*, *White Hellebore* (which see). Among the fluids are Spirits of Ammonia, Rosemary, and Lavender, strong Acetic Acid, Hartshorn, &c. From the same root, as the above, we have also *Cephalagia*, *Cephalæa*, *Cephalodyne*, pains in the head; *Cephalic Vein*, the anterior vein in the arm, so called because it was formerly the one commonly opened to relieve the head; *Cephalonia*, a kind of tumour, being a morbid product resembling brain in appearance; *Cephalogenesis*, the doctrine of the formation of the *brain* (which see).

Cera (Latin for wax). Is the product of the *Apis Melliferæ*, or Honey Bee, and of some plants, such as the *Myrica Conifera*. *C. alba* and *C. flava*, White and Yellow Wax, are the bleached and unbleached, both of which kinds are used medicinally (see *Wax*); of which substance *Cerine* and *Myrcorine* are the two principles, being respectively analagous to the *elaine* and *stearine* of oils and fats; *Ceric Acid* is produced by the action of the alkalies on wax.

Ceramen (Latin *cera*, wax). The waxy secretion of the ear which is furnished by the ceraminous glands. See *Ear*.

Cerasine. An alkaloid contained in the gum which exudes from the bark of the Cherry Tree (*Prunus Cerasus*), belonging to the natural order *Myrtaceæ*.

Cerussa. One of the Latin names for *Lead* (which see), hence we have *Cerussa Acetata*, Acetate or Super-Acetate of Lead, more commonly called Sugar of Lead.

Cerate (Latin *ceratum*, from *cera*, wax).

A composition partly of wax, partaking of the nature of ointment, being of a consistence intermediate between that and plaister. The cerates of the London, Edinburgh, and Dublin Pharmacopœias are as follows:—*Ceratum*, composed of Olive Oil and Bees' Wax alone; *C. Calamine*, the above ingredients, with prepared Calamine, well known as *Turner's Cerate*, a good dressing for wounds and ulcers; *C. Cantharidis*, a blistering application; *C. Cetacei*, composed of Spermaceti, Wax, and Oil, used to heal blisters, cuts, &c.; *C. Hydrargyri Compositum*, composed of Mercury, Soap, Cerate, and Camphor, stimulant and antisyphilitic; *C. Plumbi Acetas*, in which Acetate of Lead is the active agent; *C. Plumbi Compositum*, Diacetate of Lead, with Camphor, Wax, and Oil; *C. Resinæ* containing about a third of Resin, same as Yellow Basilicon; *C. Sabine*, containing Powdered Savine, stimulant and irritant, used chiefly to keep blisters open; *C. Saponis, Comp.* Soap, with Oxide of Lead and Vinegar; *C. Simplex*, much the same as *Cetacei*.

Cerato-Glossus (Greek *kerus*, a horn, and *glossa*, the tongue). A bone running from one of the bones of the os hyoides to the *tongue* (which see).

Cerebrum and Cerebellum. The brain and little brain; the former being the chief portion, occupying the whole upper cavity of the skull; and the latter, the hinder and lower part of the *Encephalon* (which see), and *Brain*, the nerves and arteries of which are termed *cerebral*, while *cerebritis* is a term sometimes applied to inflammation of the brain.

Cervix. The hinder part of the neck, of which the fore part is called *Collum* (which see). The above term is also applied to the neck of the *bladder* (which see); and the nerves, arteries, vertebræ, &c. of neck are termed *cervical*.

Cetaceum (Latin *ceta*, a whale). A substance obtained from the *Physeter Macrocephalus*, or Sperm Whale, (see *Spermaceti*), from which is obtained, by boiling in alcohol, a substance called *Cetine*.

Cetraria or Cetrarina. Iceland Liverwort or Moss. See *Carrageen Moss*.

Chalazium (Greek *chalaza*, a hailstone). A small tubercle on the eyelid supposed to resemble a hailstone. See *Eye*.

Chalk (Latin *Creta*). A common species of calcareous earth, properly Carbonate of Lime; with the coarser particles removed by washing, it is much used in medicine, under the name of Prepared Chalk (*Creta Preparata*); being anti-acid and absorbent it is very useful in acidity of the stomach, and in diarrhœa, after the irritating matters have been removed by copious evacuations. On account of its absorbent properties, it is also a good application to ulcers discharging a thin ichorous fluid. (See *Ulcers*). The dose of Prepared Chalk is from 10 to 40 grains, or more; it enters into the composition of the following officinal preparations:—Compound Powder of Chalk (in which it is combined with aromatics), dose 1 to 3 scruples; the same with Opium, 1 to 2 scruples; Quicksilver with Chalk (Mercurial or Grey Powder), 5 to 10 grains; Chalk Mixture, 1 to 3 ounces; Aromatic Confection, 10 to 60 grains; Chalk Lozenges *ad libitum*.

Chalk is held in solution by excess of Carbonic Acid, as in *Carrara Water* (which see). In this form it is anti-acid and astringent. Prepared Oyster Shells (*Tæsta Preparata*), and Precipitated Carbonate of Lime (*Calcis Carbonatus Precipitatum*) have the same medical properties as Chalk. See *Lime*.

Chalk Stones. Gouty concretions found in the joints, consisting of Urate of Soda and Phosphate of Lime. See *Gout*.

Champagne. A well known light French wine, often accused of causing gout and indigestion, which, however, are more likely to arise from the other table luxuries taken by champagne drinkers, who, on account of its high price, must necessarily be of the upper classes. This wine contains about 12 per cent. of alcohol, a much smaller proportion than that of Port, Sherry, Madeira, and other strong dry wines; it has, however, a powerful intoxicating effect on account of its effervescence. See *Wines*.

Chalybeate (from *Chalybes*, a people who dug iron out of the earth). A term applied to springs impregnated with iron and other minerals. (See *Mineral Waters*). Sometimes, also, to medical preparations which contain Iron, as *Vinum Ferri*, (Wine of Iron). *Chalybes rubigo* is an old name for the *Sub-carbonate* of *Iron* (which see).

Chancre (Greek *kankinos*, a cancer). A sore which arises from the direct application of the syphilitic poison. Chancres commence with small pustules, usually on the penis in men, and the labia in women; after breaking, they degenerate into yellowish or greyish coloured sores with a firm basis. The proper *treatment* is destruction of the infected tissues by means of Nitrate of Silver; a free application of which is requisite, either in the form of a strong solution, say about a drachm to an ounce of Distilled Water, brushed over the surface, or used to saturate a piece of lint, or else applied in the solid form; in either case, poulticing with Linseed Meal is necessary. See *Syphilis.*

CHARCOAL. The residue of burnt animal, vegetable, and mineral substances. Several kinds of Charcoal are employed medicinally, such as—1st. Burnt Sponge (*Spongea usti*), which is Carbon mixed with Phosphate and Carbonate of Lime, and Sub-carbonate of Soda; 2nd. Burnt Seaweed, sometimes called Vegetable Æthiops, or *Pulvis Quercus Marina*, which is procured from the Bladder Wrack, a common seaweed, the *Fucus Vesiculus* of botanists; 3rd. Wood Soot (*Fuligo Ligni*), collected from chimneys under which wood is burnt: there are others, such as Ivory and Lamp Black, which are used in the useful and ornamental arts. But it is with the Charcoal of burnt wood, (*Carbo Ligni*), that we have more especially to do at present; this is antiseptic and decolorant, it is used as an ingredient in tooth powder, and also in poultices for gangrenous wounds, in the proportion of about one part with one of Linseed Meal, and two of common Bread and Water poultice; it is also sometimes given internally for hæmorrhage, dose 10 to 20 grains. The animal Charcoal, which is obtained by burning Bullock's Blood or Bones, possesses much the same properties. See *Carbon.*

CHARPE (French) sometimes called *caddice.* The loose fibres from scraped lint, used to absorb the discharge from wounds. In France it is much used, but little in this country. See *Lint.*

CHEESE. This favourite article of diet, which while it may be taken with impunity, and even, perhaps, with advantage, by those of good digestive powers and active habits, sometimes acts like a poison on those who are bilious, dyspeptic, and sedentary. It is, as most persons know, the curd of milk, mixed with a proportion of butter: this curd, which is called by the scientific *caseine*, very closely resembles albumen in its composition, and its nutritive quality may be judged of by the fact enunciated by a great authority, that "from caseine alone, the chief constituents of the young animal's blood, as well as its muscular fibres, membranes, &c., are formed in the first stage of its life." Yet, for all this, cheese is anything but nutritious to most persons, because the caseine which it contains is presented to the stomach in an indigestible form. In new cheese is this especially the case; as it verges towards decay it loses its toughness, and the close coherency of its particles: a small piece at the close of a full meal is thought to assist digestion; it probably may do so, in the same way as the whip or spur assists the race horse to reach the goal, by causing the stomach to put forth all its powers. Toasted cheese is decidedly more injurious than raw, and the stimulus of mustard and pepper may well be applied to enable the digestive organs to manage a Welsh rare-bit.

CHESTNUTS. The fruit of the *Castana vulgaris* are perhaps somewhat less unwholesome than most nuts, as they contain much starch and no oil; roasted or boiled they are more digestible than raw, but they are never fit for weak stomachs, especially when converted into flour, in which state they are largely eaten on the Continent.

CHICKEN POX. This is a mild form of eruptive disease, which affects a person but once in a lifetime, and which can generally be traced to specific contagion or infection: it is mostly confined to children.

Symptoms. It is preceded, in most cases, but not in all, by slight fever, which lasts for one or two days before the eruption appears, which at first is in the form of conical pimples with a white head, mostly on the shoulders, breast, and neck, and more sparingly over the face and body generally. These vesicles, on the second day, appear like little globular blisters, but with little or no surrounding inflammation; they now become filled with a watery fluid which is not converted into pus, as in Small Pox, to the milder kind of which this disease bears some resemblance, and, about the fifth day, the bladders shrivel up and dry away, leaving only crusts or scales.

Treatment. On the first appearance of the eruptions, the patient should be put upon spare diet; this, and a dose or two of some cooling aperient is generally all that is necessary; but should the febrile symptoms run high, administer small doses of James's, or Antimonial Powder, with saline draughts and gentle laxatives; plenty of cool drinks, and, if the bowels are at all obstinate, emollient glysters. Care must be taken that the skin is not irritated by scratching; as if it is, painful and troublesome sores may be produced, and also that the patient does not take a chill. If these precautions are observed, little or no danger is to be apprehended from Chicken Pox; the main distinctions between which and Small Pox are the absence or extreme mildness of the premonitory fever in the former disease, and the form and contents of the vesicles; those of the latter eruption being filled with dark matter, and having, invariably, a depression in the centre. What is commonly called *Swine Pox*, is but a species of Chicken Pox or *Varicella* (which see).

CHICORY. The root of the *Cicorium Intyblis*, a plant common enough in our fields and hedge-rows: is much used for the adulteration of Coffee; so much so, indeed, that to the popular taste the beverage is disagreeable without it. This admixture is generally considered a very harmless one; but the *Lancet* Sanatory Commissioners say that "infusion of Chicory alone, especially, and also when mixed with Coffee, in the proportion of 25 per cent., produces a sense of weight at the stomach, langour, and headache." It has, by an eminent Continental authority, been assigned as one of the exciting causes of amaurosis. Infusion of Chicory occasionally acts as an aperient, at other times as a diuretic. In consequence of Chicory not containing an essential oil, it has not, when roasted, the fragrance of Coffee. Its infusion has a sweetish or mawkish taste, and is dark-coloured, thick, and glutinous. This root is in itself extensively adulterated with a great variety of substances, among which bullock's-liver and venetian-red may be named, as especially objectionable. Chicory-lovers, however, and those who cannot afford to drink pure Coffee, will, no doubt, continue to use it. See *Diet*, *Regimen*.

CHILBLAINS. An inflammatory affection of the skin, generally confined to the extremities, and especially the fingers and toes. Exposure to sudden alternations of heat and cold usually give rise to these troublesome visitations, which are rather characterized by itching and irritation than pain. Persons of scrofulous habit and languid circulation, are most subject to them, as are children and aged persons. It is a popular fallacy, that to keep the surface of the skin in a state of unnatural warmth, by hot bottles and woollen socks by night, and fur linings and feet warmers by day, is the best way to prevent Chilblains; but this only serves to keep up a constant perspiration, and so weakens the tone of the system, and increases the liability to them. A nightly foot-bath of cold, or for aged persons, of tepid salt and water, with plenty of friction with a rough towel, and exercise during the day, will be most likely to keep Chilblains from the feet; and for the hands, a careful rubbing so as to get them thoroughly dry after every washing or dipping in water, and an avoidance of all unnecessary exposure to severe cold, are the best preventive measures. It is a good plan to have a pan of oatmeal always at hand, and to rub them well over with that after they have been wetted and wiped as dry as possible; this will absorb any moisture left by the towel, and have a softening and cooling effect.

Should Chilblains come, as sometimes they will, in spite of all precautions, let them be gently rubbed every night and morning with some stimulant application, Alcohol, Brandy, Spirits of Turpentine, or Camphorated Spirits of Wine, are all good for this purpose; but the application which we have found most efficacious is a lotion made of Alum and Sulphate of Zinc: 2 drachms of each to half a pint of water, rubbed in warm; it may be made more stimulating by the addition of 1 ounce of Camphorated Spirits. When the Chilblains are broken there must be a different course of treatment; the ulcers formed are often difficult to heal, especially in weakly and ill-conditioned persons; there is generally a great deal of inflammation which must be subdued by means of bread and water poultices applied cold, and afterwards by cooling ointments, such as the Cerate of Acetate of Lead, or Spermaceti Ointment, with 40 drops of Extract of Goulard added to the ounce; should there be a disposition to form proud flesh, the Ointment of Red Precipitate should be used.

CHIRAGRA (Greek *cheir* the hand, and *agra* seizure). Gout in the hand (which see), also *Arthritis*, *Podagra*, and *Cleisagra*.

Chirurgery (Greek *cheir*, and *ergin* work). That branch of the healing art which treats diseases and injuries to the body by application of the hand, or of instruments. See *Surgery*.

Chloride of Calcium (Latin *Calcii Chloridum*). Formerly called Muriate or Hydrochlorate of Lime, is deobstruent, alterative, and tonic, and is given in bronchocele, and scrofulous diseases. It is usually administered in solution as *Liquor Calcii Chloridi*, dose from 20 to 60 drops in milk, or some other fluid.

Chloride of Lime (Latin *Calx Chlorinata*). Commonly used as an antiseptic and deodorizer. See *Chlorine*, *Lime*.

Chlorosis (Greek *chloros*, green). The Green Sickness. See *Anæmia*, *Menses*.

Chlorine (same root as above). A greenish coloured gas produced by the action of Muriatic Acid on Peroxide of Manganese; it was formerly called Oxy-Muriatic Acid; it is a simple incombustible body possessing a disagreeable odour and acid taste, having the property of destroying all colour in vegetable and animal substances, and is much employed in the process of bleaching, and also for the purpose of destroying the effluvia arising from contagious diseases. Its various chemical combinations need not be particularized in a work of this description, as they are interesting and useful only to the chemist and philosophical experimenter; some of them, however, we may mention, as coming within the scope of our present subject, being used as remedial agents, such are the *Chlorides* of *Lime* and *Mercury*, *Potash*, *Soda*, *Sulphur*, *Zinc*, *&c.*, of which an account will be found under those subject headings; the *Protochloride* and *Perchloride* of *Mercury*, commonly known as Calomel, and Corrosive Sublimate, are among the most valuable of the combinations into which this gas enters. See *Mercury*.

Chocolate and Cocoa. These well-known articles of diet are prepared from the seeds or beans of the *Theobroma Cacao*, a tree found chiefly in the West Indies and South America. The cocoa nibs, as they are called, undergo a process of roasting to free them from the husks and develope the aroma. When genuine, and properly prepared, they make a highly nutritious beverage, consisting of a large proportion of oily or fatty matter, some starch, and a peculiar principle called *chromine*, which, according to Liebig, approaches very nearly to *theine*, and *caffeine*, the characteristic principles of tea and coffee, in its nature and composition; it has not, however, the same stimulating properties, and therefore Cocoa may be taken by those with whom, from weakness of nerves or other causes, these beverages would be likely to disagree. Cocoa in a perfectly pure state can seldom be obtained; the only way is to purchase the nibs and crush and boil them. In the various preparations sold under the name of "flake," "granulated," "homœopathic" Cocoa, and the like, there is an admixture of sugar, starch, flour, bean meal, cocoa husks, or some foreign substance, which is not so expensive as the Cocoa itself, and which, if it be not deleterious, reduces and alters the quality of the article purchased. Chocolate, of course, as a professedly manufactured article, is liable to any amount of adulteration which may be deemed expedient by the preparer. Ochre, Red Lead, Vermilion, Sulphate of Lime, Chalk, Tallow, are among the substances said to be employed in the preparation of the cheap kinds for the market, therefore one had need be careful of whom he purchases his chocolate, and to avoid that which is offered at a particularly low price. The French manufactured chocolates and cocoas are said to be less adulterated than the English. All the beverages of which Cocoa is the basis are apt to disagree with weak stomachs, on account of the oil which they contain; but to those of strong constitution, and particularly if engaged in active duties, they may be recommended on account of their large amount of nutrition; many of them, however, contain vanilla, and this renders them somewhat indigestible.

Choke Damp. The foul air of mines, wells, &c., which is unfit for the purpose of respiration. See *Carbonic Acid*.

Chole (Greek for *Bile*). Hence we have *Chologogues*, a term formerly applied to purgatives, which caused bilious discharges; *Cholodocus* or *ductus*, the common bile duct; *Cholate*, a salt of the bile; *Cholic Acid*, a peculiar animal acid which has a sweet taste; *Cholesterine*, the principle of the bile, and of biliary calculi; this substance, heated with nitric acid produces *Cholesteric Acid*, whose salts are called *Cholestorates*. See *Bile*.

Cholera. There is some doubt as to the origin of this word, some ascribing it to the Greek *chole*, bile, and *reo* to flow, and some to *cholera*, a waterspout. But from whatever the term may come, there is no doubt whatever that it indicates one of the most fearful diseases to which human nature is liable, and one, too, which originates in biliary derangement; this is more especially the case with the *British* or *Bilious Cholera*, which we will first turn our attention. s symptoms are nausea, pain in the stomach nd bowels, with distension; vomiting, for he most part, of bilious matter, with severe riping; followed by cold clammy sweat, nd cramp in the lower extremities. This isease most usually occurs in the hot summer and autumnal weather, when it becomes pidemic, and often rages with great iolence; in warm climates, cases occur at ll seasons of the year; and those coming rom countries having a lower temperature re most likely to be attacked. The proable *cause* is some derangement of the iliary secretion; the bile is either rendered more acrid by the action of the heat, or ncreased in quantity; sometimes the immediate cause would appear to be a sudden hill which obstructs the perspiration, or he eating of unripe, or acid fruits, or taking ndigestible food. That the liver, and mucous membrane of the stomach and intestines are he principal parts affected, there can be no oubt; but that the former is not always the primary origin, is shewn by the circumtance that purging and vomiting sometimes ome on and continue for awhile before any bile is noticed in the discharged matter; for *reatment*, see *British Cholera*, head *Bile*.

Cholera Morbus is but another form of the above, like which it is often preceded by heartburn, a sour taste in the mouth, and flatulency; there is vomiting and purging of a decidedly bilious character; griping and distension of the stomach, cramps, and ultimately convulsions; clammy sweats, difficulty of breathing, an anxious expression of face, constant hiccup, and if relief is not quickly obtained, death.

Asiatic or *Malignant Cholera*, with which we first became acquainted in this country in the autumn of 1831, is a more severe form of the disease than either of the above; it very commonly comes on without any premonitory warning whatever, and the patient is a corpse in a few hours. Cold perspiration, with prostration of strength, vomiting and purging, but not of bile in this case, but a thin, colourless, odourless fluid, like rice-water; then come the dreadful cramps, seizing on the calves of the legs, the thighs, the fingers, the toes, and all muscular parts; the body is bent, the limbs twisted, the face becomes cadaverous and corpse-like, with sharp and contracted features, sunken eyes, with a dark circle round them, blue lips, and a tongue of a leaden hue; the look wild and pitiful, the breathing hurried and difficult, the voice low and husky, the form seems to shrink and dwindle visibly, the pulse, at first small and weak, becomes rapidly more so, until its feeble beatings can scarcely, if at all be detected; a smell, like that of a charnel-house is exhaled from the body, which loses its natural warmth, as more withered and ghastly becomes the face; and the arms and hands wrinkled like those of a washerwoman, with livid finger nails fall helplessly at the side, and the weak, wailing voice sinks to a whisper in its frequent calls for drink, to quench the intolerable thirst. To the last, there appears to be a wandering kind of consciousness, but no power to express a wish or will; there is utter indifference in that forlorn look which the sufferer occasionally casts around, and no ray of pleasant recognition lights up the eye when it rests upon familiar faces; then comes the perfect insensibility of collapse, and soon the feeble flickering light of life is quenched; unless, as is sometimes the case, re-action sets in; then the pulse begins to flutter, like a bird escaping from the snare, the skin to get warm again, the dim eyes to brighten, the face to assume a more natural hue, the flaccid muscles to become more tense, the pulse is again perceptible, and it may be seen at a glance that the crisis is past, and the vital energies of the patient have rallied, and are likely to carry him through this eminent danger.

With regard to the *treatment* of Cholera, there is much disagreement among medical men, and so rapid is the progress of the disease, that there really is little time for the operation of remedies. At times, when it is likely to be prevalent, particular attention should be paid to the state of the bowels, and the slightest tendency to looseness should at once be checked. Chalk mixture, with a little Aromatic confection added, taken after each loose motion, add 5 or 10 drops of Laudanum to each dose, and take milk and farinaceous diet; avoid unripe fruits, hard puddings, pastry, and any indigestible food; live temperately, but not too abstemiously, so as to weaken the system; be careful as to the purity of the water drunk, and to avoid chills, or whatever tends to lower the standard of health. If the bowels are confined, do not take saline aperients, but such as are of a warm, stimulating character, such as Rhubarb, combined with Magnesia, mixed in Cinnamon or Peppermint Water. If the more severe symptoms above described come on, obtain medical help immediately if possible; should it not be so, use every effort to keep up the temperature of the body by hot applications, apply friction to the muscular parts most affected with cramps; hot bran bags, with turpentine sprinkled over them are good, mustard poultices, and strong Linaments. Let the patient gratify his intense thirst with copious draughts of cold water, in every quart of which has been dissolved 1 drachm of common Salt, the same of Carbonate of Soda, and 20 grains of Chlorate of Potash; administer every quarter of an hour, by placing it on the tongue, a powder containing Calomel and Opium, of each 1 grain; and about every half-hour a draught, with 20 drops of Sulphuric Ether, or 5 drops of Chloroform, with 10 drops of Laudanum, or Camphor Mixture. If these remedies fail, nothing more can be done, but they should be persevered in as long as there are any symptoms of life in the patient. With reaction comes fever, which sometimes runs very high; this requires careful treatment. (See *Fever*.)

Some medical men recommend warm stimulating drinks, such as Brandy and Water, with cataplasms of Opium and Camphor, blisters to the stomach, and anti-spasmodic glysters. An emetic, followed up by the exhibition of large quantities of hot water, and dilute Sulphuric Acid, was found a very successful mode of treatment on the African station in 1854; of 106 cases treated, all, it is stated, recovered.

When the vomiting and evacuation of the bowels stay too suddenly, and spasmodic attacks follow, the action should be restored by mechanical irritation, and copious draughts of warm water, in which some neutral salt, such as Sulphate of Magnesia has been dissolved; 20 drops of Laudanum, and 40 of Fœtid Spirits of Ammonia, in a little warm water, should also be taken in this case, about every half-hour. Very large doses of Calomel are given by some in this disease, but the propriety of such a course may be questioned; it is, perhaps, well to administer 5 grains at the outset, and follow it up with smaller doses, as above directed. Nothing can more clearly show how little is really understood of the nature of this terrible disease, than the diverse opinions entertained with regard to the proper remedial measures: it is, indeed, the pestilence that walketh in darkness, and whether contagious as some contend, or infectious, as others, or both, as seems likely, it warns us to be prepared for the summons that may come at any moment, to the presence of the great Judge of all.

Chondros. (Latin for *Cartilage* (which see); hence we have *Chondrology*, a description of cartilages.

Chordee (French from Greek *koron*, a chord). A painful erection of the penis, attending *Gonorrhœa* (which see).

Chorda (Greek *Chorde*, a cord tendon). Hence we have *C. tympani*, a fil ment of the videan nerve, which enters t tympanum (see *Ear*); *C. tendineæ*, t tendonous strings which connect the *carn columnæ* of the heart to the auricular valv (see *Heart*); *C. vocales*, the vocal lig ments, and *C. Willisii*, the small fibr crossing the surface of the *Dura Mate* See *Brain*.

Chorea Sancti Viti. A convulsi motion of the limbs, as of a person dancin See *St. Vitus's Dance*.

Chorion (Greek for a domicile). The e ternal membrane of the *Fœtus* (which see

From the same root with *eidos* likene comes *Choroid*, resembling the chorion, term applied to the plexus and web of t *Pia Mater*, and to the inner tunic of t *Eye* (which see) and *Brain*. The derm or outer layer of the skin is also term *Chorium*.

Chronic (Greek *chronos*, time). Diseas of long standing are so termed in contradi tinction to *acute*, applied to the early a more active stages.

Chrysos (Greek for gold). Hence *Chr sobalanus*, a Golden Acorn, applied to t Nutmeg; *Chrysocolla*, Golden Glue, mea ing Borax; *Chrysomelia*, Golden Apple, t Seville Orange. These terms are now on found in old medical works.

Chyazic. A term derived from t initials of Carbon, Hydrogen, and Azot and applied to an acid.

Chyle (Greek *kylos*, juice). A mill like fluid, which being separated from t chyme, or digested food, after it has pass from the stomach into the small intestin and become mixed with the bile and pa creatic fluid, is taken up by the absorben called *Lacteals* (which see); also *Absor tion*, *Digestion*, *Pancreas*.

From the same root comes *Chylificatio* the process by which the chyle is separat from the chyme, and *Chylopoietic*, a ter applied to the viscera and vessels connect with the formation of chyle.

Chyme. A grey semi-fluid matter, bein the substance into which food is reduced b the process of digestion in the stomach b fore it passes into the duodenum, or sma intestines. *Chymification* is the process b which the aliment is converted into chym (See *Aliment*, *Digestion*, as above.)

Cicuta. One of the Latin names f Hemlock, *Conium* being the other (whic see). The alkaloid obtained from Hemlo is called *Cicutin*.

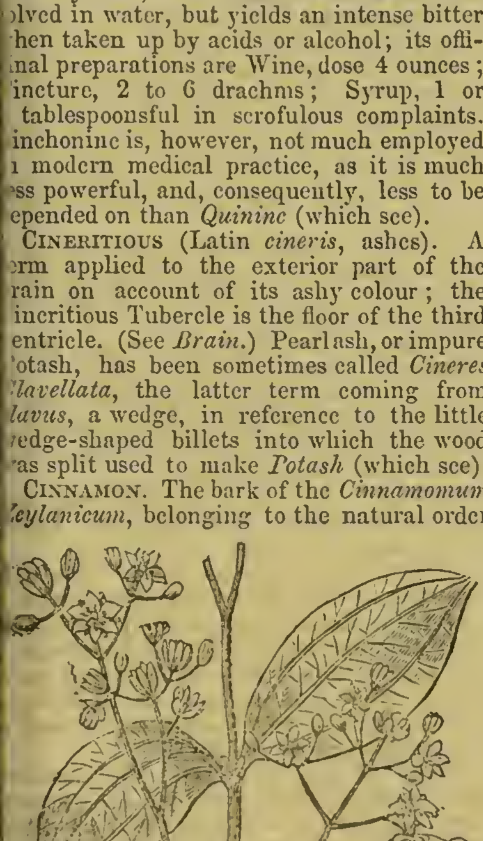
Cicatrix (Greek for a scar). A mark le after the healing of a wound or ulcer; hence o, *Cicatrization*, the process by which ounds and sores heal.

CILIÆ. The eyelids or lashes; hence *illary*—the name of arteries, processes, lands, &c., belonging to the *Eyelids* (which e).

CINCHONA (Latin for *Bark*, which see). ts active principle is *Cinchonine*, an alkaloid und most abundantly in the grey Peruvian ark (*Cinchona Condaminea*); it is in the rm of white, semi-transparent, needle-ke crystals; has little taste when dislved in water, but yields an intense bitter hen taken up by acids or alcohol; its offinal preparations are Wine, dose 4 ounces; incture, 2 to 6 drachms; Syrup, 1 or tablespoonsful in scrofulous complaints. inchonine is, however, not much employed modern medical practice, as it is much ss powerful, and, consequently, less to be epended on than *Quinine* (which see).

CINERITIOUS (Latin *cineris*, ashes). A rm applied to the exterior part of the rain on account of its ashy colour; the ineritious Tubercle is the floor of the third entricle. (See *Brain*.) Pearlash, or impure otash, has been sometimes called *Cineres lavellata*, the latter term coming from *lavus*, a wedge, in reference to the little edge-shaped billets into which the wood as split used to make *Potash* (which see).

CINNAMON. The bark of the *Cinnamomum eylanicum*, belonging to the natural order *Lauraceæ*: it possesses cordial, carminative, and astringent properties, and is prescrbied in dyspepsia, flatulency, diarrhœa, and vomiting, although frequently asan dajunct to bitter tonics, purgatives, and vegetable and metallic astringents. its active properties depend upon the presence of an essential oil *(Oleum Cinnamomi)*, much used in flavouring sweets and confectionary; this is a powerful stimulant. Cinnamon enters into the composition of several pharmaceutical preparations; the dose of the Simple and Compound Powders, is from 5 to 20 grains; of the Simple and Compound Tinctures, 1 to 2 drachms; of the Water 1 ounce to 1½ ounces. See *Cassia*.



CINNABAR. A native metal, properly Sulphuret of Mercury, used in the prepared form of Bisulphuret, (*Sulphuretum Hydrargyri Rubrum*) for fumigating venereal ulcers. See *Mercury*.

CIRCULATION (Latin *circulus*, a circle). The flow of the blood through the heart, arteries, and veins: in man, as in warm-blooded animals generally, there is a double circulation; one being *pulmonic*, through the lungs, and the other *systemic*, through the whole system. In order that our readers may understand this, we will briefly trace out the course of the blood from the left ventricle of the heart, whence the vital fluid, of a bright red colour, and containing all necessary elements of nutrition, is pumped out through the aorta, and passes into all the arterial branches and capillaries, to deposit the nutriment required for each structure, giving out oxygen, and taking up carbonic acid in exchange, and then returning through the veins, of a deep purple, being loaded with carbon, through the *venæ cavæ* to the heart by the right auricle, which contracting, forces it into the right ventricle; and from thence it is propelled through the pulmonary artery into the vessels of the lungs, which, expanding in the act of inspiration, draw in the air by which the blood is re-oxygenised, losing in respiration its excess of carbon, and then flowing through the pulmonic veins into the left auricle of the heart, with its bright red colour and nutritive properties restored. This short passage from the great central organ of circulation to the lungs and back again, is what is called the *pulmonic* circulation; and the longer course which we have just described, through the whole system, is the *systemic*. From the left auricle, where we left the blood, it is forced by compression into the left ventricle, from whence we set out; and thus the process is repeated, while the principle of vitality is unimpaired; it is quick or slow, according to the vigour of the constitution of the individual, and the healthful or diseased state of the several organs concerned in the production, transmission, and composition of the *Blood* (which see), also *Heart* and *Respiration.*

CIRCUMCISION (Latin *circumcido*, to cut). This operation, to which there are so many allusions in the Bible, consists in the removal of a circular portion of the foreskin of the perpuce. See *Phymosis.*

CIRCUMFLEXUS (Latin *circum*, about, and *flecto*, to bend). A term applied to a muscle which stretches the palate horizontally, and also to the axillary nerve, &c.

CIRRHOSIS (Greek *kirros*, yellowish). A diminution and deformity of the liver is so called, when, under the influence of disease, that organ presents a dense, granular, and wrinkled and yellow appearance. See *Liver.*

CIRSOS (Greek *kirsos*). A varex, or dilated vein. (See *Varicose Vein*). From the same root come *Cirsocele*, a varicose enlargement of the spermatic vein, and *Cirsopthalmia*, a varicose affection of the blood vessels of the *Eye* (which see).

CITRUS. The name of a genus of plants belonging to the natural order *Aurantiaceæ;* from the *Citrus Aurantium* we obtain Oranges; from the *C. Begaradia*, the essential oil known as Essence of Bergamot; and from the *C. Limonum*, Lemons, the juice and peel of which are so largely employed in scorbutic and other complaints. (See the above several headings, also *Citric Acid.*)

CLAP. See *Gonorrhœa.*

CLAUSURA (Latin *claudo*, to shut). The imperforation of any canal or cavity.

CLAVATIO (Latin *clava*, a club). A kind of articulation of bones in which they are fixed, as the teeth in their sockets. See *Gumphosis.*

CLAVICULA (Latin *clavis*, a key). The clavicle, or collar bone, so called from its resemblance to an ancient key.

CLAVUS (Latin for a nail). A term applied to corns and to *Staphylosis*, or a tumour on the eyelid; hence, too, we have *Clavus hystericus*, a fixed pain in the forehead as if produced by a nail.

CLEISAGRA (Greek *kleis* the clavicle, *agra* seisure). Gout in the articulation of the clavicles. See *Arthritis*, *Choragra*, *Podagra.*

CLIMACTERIC (Greek *klimakterh*, the step of a ladder). The life of man is usually divided into periods or stages of seven years each, and they are distinguished as the 1st, 2nd, 3rd climacteric, and so on; the 9th being, by common consent, styled the "grand climacteric." When this is reached there is in most cases, a perceptible decay giving way of the vital powers, which term *Climacteric disease*, although th may probably be no affection of any par cular organ that can be discovered. usual symptoms are loss of appetite, restle ness at night, sluggish bowels, quick pul furred tongue, emaciation, sharpening the features, change of colour in the ha and deepening of the lines of the face. Af these signs of a call from the tomb, we ha frequently swelling of the limbs, eruptic of the skin, feebleness of body, and men apathy; often a distressing cough, difficu of breathing, and chilliness on account impeded circulation. The only *treatm* to be adopted is generous living, freed from the cares and anxieties of busine and that generally recommended under t head of *Age* (which see).

CLIMACTERIC TEETHING. The produ tion of teeth at a very late period of li after the permanent teeth have been lost accident or natural decay. When this do occur, it is mostly between the ages of and 81, about the time of the grand clima teric period. See *Teeth.*

CLIMATE (Greek *klima*, a region). Tl term is used in a medical sense to denote t conditions of the atmosphere in differe countries or districts, with reference to effects upon the human constitution. The are few diseases which may not be in sor way influenced by climate; it, therefo becomes an important part of the medic practitioner's duty to ascertain in what w this influence is exerted; to make hims acquainted with the atmospheric conditio of different localities, so that he may be ab to direct his patients to those in which will most likely to find relief from the diseas by which they are attacked. There a many circumstances which conspire to alt and modify climate, such as a low elevated situation; proximity to, or di tance from the sea, or any large body water; the nature of the drainage, th character of the soil, the amount wood and of shelter from certain prevaili winds, &c. As a general rule, patients d rive most benefit from a change of climat when the locality to which they remo presents atmospheric conditions the rever of those from which they come. The is no doubt, too, that the stimulating effe upon the mind, of novel scenes, and the e citement of travel, has much to do with tl beneficial effects which are generally attr buted to change of climate. The great d sideratum in this country, is a shelter situation, where those affected by pulm

ry and other diseases, may breathe a mild
d equable atmosphere during the winter
d spring months. Sir James Clark, our
eatest authority on this subject, has di-
ded the milder parts of England into four
stricts, as follows:—1. *The South Coast*,
cluding Undercliff, in the Isle of Wight,
astings, Brighton, and parts adjacent to
ese places. 2. *The South-west Coast*,
aching from the Isle of Wight to Corn-
ll, and including Torquay, Dawlish, Sid-
outh and Exmouth, &c. 3. *The Land's
nd*, including Penzance, Flushing, &c.
The West of England, comprehending
e places along the borders of the Bristol
annel and estuary of the Severn; here
e find Clifton, which has a more bracing
d sharp atmosphere than that of the
uth-west coast, and is, therefore, better
ited to a relaxed and languid habit, and
ss for pulmonary and other diseases, where
ere is irritation and inflammatory predis-
sition. Foreign climates, by the same
thority, have also been classified and
vided into six climatic zones, if we may
speak:—1. *The South-west of France*,
mprehending the tract of country extend-
g from Bordeaux and Bayonne to Tou-
use, with the little town of Pau for its
ace of chief resort. 2. *The South-east of
rance*, comprehending the tract of country
hich stretches along the shores of the Me-
terranean, from Montpelier to the banks
the Var, the boundary stream between
rance and Piedmont; here we have the
wn just mentioned, Marseilles, with its
arp, dry air, and Hyéres, possessing all
s advantages of a shelter from the nor-
erly winds. 3. *Nice*, situated on the same
ne of coast as Provence, and also pro-
ected from the northerly winds, and espe-
ally the Mistral. 4. *Italy*, with its balmy
d somewhat humid atmosphere, and also
ith its scorching Sirocco wind, known only
the summer, however, when invalids
ould not be there, as the climate is too
ervating. 5. *The Mediterranean Islands*,
cluding Malta and Sicily, not desirable
r the summer residence of invalids.
The Atlantic, including Madeira, the
anary Isles, the Azores, the Bermudas, the
ahamas, and the West Indies.

The result of these inquiries into the
ature and character of various climates, is
e recommendation that those who have
ulmonary Consumption, should go to Ma-
eira, Rome, or Pisa, in Italy, and in Eng-
nd, Torquay, or Undercliff. *Chronic
ronchitis*. Rome or Pisa, or Nice abroad;
orquay, Undercliff, or Brighton, at home.
sthma, Nice, or Rome, the city of classical associations; *Chronic Rheumatism*, the same, the former being preferable where there is an irritable state of the digestive organs. *Gout*, Genoa, or the West Indies. *Scrofula*, Nice and Rome, or the West Indies. *Dyspepsia*, the south of Europe, and especially of Italy; also good for *Hypochondriasis*, and many other nervous affections. See *Air*, *Atmosphere*, *Respiration*.

CLINICAL (Greek *kline*, a bed). Medical studies pursued at the bedsides of the patients, where, in most hospitals, clinical lectures are delivered on the particular cases.

CLINOID (Greek *kline* and *eidos* likeness). Processes of the *sella tunica* of the sphinoid bone, so called from their resemblance to the knobs of a bed-post.

CLITORIS (Greek *kleio*, to hide). A part of the female pubendum concealed by the labia majora; hence, too, comes the term *clitorismus*, a morbid enlargement of the clitoris.

CLOACA (Latin *cloacus*, a sewer). The openings, in cases of necrosis, leading to the enclosed dead bones; so called, because often filled with offensive matter.

CLONIC (Greek *kloneo*, to move to and fro). A name for *Spasms*, (which see.)

CLOVES (Latin *caryophyllus*, from Greek *karyon* a nut, and *phyllon* a leaf). These

are the unexpanded blossoms of the *Caryophyllus Aromaticus*, a plant of the natural order *Myrtaceæ;* they belong to the class of stimulating aromatics, are chiefly useful in flatulent disorders, to correct the griping tendency of purgatives, and as an adjunct to bitter tonics. Dose, of Powdered Cloves 2 to 8 grains; Infusion, 1 to 2 ounces; Tincture, 20 to 30 minims; Essential Oil, 2 to 6 drops—the latter is often used with good effect in tooth-ache; combined with Cajeput oil, Opium, and Camphor it is more likely to be effective.

Club Feet (in Latin *Pedes contorti*). A congenital distortion of the feet. See *Feet.*

Clyster or Glyster (Greek *Klyso*, to wash out). A well-known method of administering medicines, when, from some obstruction in the passage to the stomach, or other cause, it is impossible or inexpedient to give them in the ordinary way. In cases of lockjaw, diseased gullet, &c., where nutriment cannot be conveyed by the throat, it is sometimes thrown up by the rectum, and so life is sustained for a considerable time, perhaps until a cure can be effected. The nature of Clysters depends upon the objects they are designed to effect; thus, they are either emollient, anodyne, or purgative; they are often administered to assist the operation of opening medicines; or in cases where the stomach is in too irritable a state to retain them; and to destroy ascarides or maw-worms. The following select formula of Clysters may be found useful:—*Anodyne*, for dysentery, or violent purging, pain in the bowels, &c., take Starch, 8 ounces, Tincture of Opium, 1 drachm, Warm Water, a pint; mix. *Antispasmodic*, for colic, flatulency, &c., take Tincture of Assafœtida, ½ an ounce, Tincture of Opium, 20 drops, thin Gruel a pint; mix. *Laxative*, Epsom Salts, 1½ ounces; Olive or Castor Oil, a tablespoonful, thin Gruel, a pint; mix. *Astringent*, take powdered Galls ½ an ounce, or Gallic Acid 1 drachm, Rain Water, warm, a pint; mix; useful in falling of the rectum, piles, &c. *Diuretic*, take Spirit of Turpentine, ½ an ounce, Yolk of an Egg, Infusion of Linseed, a pint; in stone, suppression of urine, tetanus, &c.; also good for worms. *Nutritive*, Milk, or Mutton Broth, and Warm Water, equal quantities. A good *Emollient* Clyster is made by adding an ounce of Olive Oil to a pint of Barley Water; useful in peritoneal inflammation. A *Salt* Enema is made by adding a tablespoonful of Common Salt to a pint of tepid Water; useful to dislodge worms; and a *Tobacco* Enema, by pouring a pint of boiling Water on a drachm of dried Tobacco leaves: in strangulated hernia this may be injec with advantage; it has sometimes enab the surgeon to reduce the gut, when ev other method has failed: only half quantity should be thrown up at once, its effects upon the system may be v injurious. For modes of application, instr ments, &c., see *Enemas, Lavements.*

Coagulation (Latin *con* and *agere*, bring together). The act of coagulation forming into a solid substance; this may either *spontaneous*, like the cohesion of particles of blood; or *induced*, as the eff produced upon albumen by heat, alcoh acid, &c. *Coagulable Lymph* is the fl effused from wounds, which afterwards lidifies and becomes the bond of union, *Cicatrix*, which see. *Coagulum* is dist guished, 1st, as *clot*, applied to the bl only; 2nd, *albumous*; 3rd, *curd*, applied milk.

Coaptation, a setting or joining of bone. See *Fracture.*

Cocculus Indicus (Greek *kokkos*, a gra literally Indian grain). A name given to berries of the *Cocculus Tuberosus*, the ac principle of which is *Picrotoxia* (wh see).

Cocus Butyraceæ. The Mackaw t the kernels of which contain a proport of *Palm oil*, (which see.)

Coccyx (Greek *kokkus*, a cuckoo). lower end of the spine, so called from suppo sed resemblance to a cuckoo's be

ther name for it is the *Os coccygis*, a
scle of which is called *Coccygeus*. See
uda, Spine.

OCHINEAL (Greek *kokkos*, a grain).
netimes called *Coccinella*, an insect which
ds on several species of cactus, and has
ice been distinguished as *Coccus Cacti;*
its dead state it closely resembles a
nkled seed, or grain, hence its Greek
ne. Its use is chiefly as a colouring in-
dient; but by some it is supposed to
sess anodyne and antispasmodic proper-
, and, therefore, its employment in
ping cough: the dose of the powder is
m 5 to 10 grains, it is usually given
ed with Salt of Tartar; dose of the
cture is from 30 drops to 2 drachms.

OCHLEARIA OFFICINALIS, (Scurvy Grass).
common plant possessing antiscorbutic
l diuretic properties, formerly much used,
now seldom prescribed. The *Spiritus*
hleariæ is considered good as a wash for
mouth and gums in scurvy; it is also
en for the same complaint, dose ½ a
chm to a drachm; dose of the Juice, ½ an
ice to 2 ounces, of the Syrup, ½ an ounce
n ounce. See *Scurvy*.

OCHLEA (Greek *koklos*, a conch). A
ity of the ear, resembling the spiral shell
the snail. (See *Ear*.) From the same
t comes *Cochlearis*, Latin for a snail's
ll; a term applied to the spoons used for
administration of medicines; they are
tinguished in prescriptions as *Cochlear amplius*, *mediocre*, and *minimum*, a table, dessert, and teaspoon. (See *Apothecaries' Measures*.) In the botanical genus, called *Cochlearia*, is included Horseradish and Scurvy Grass.

COCOA NUT. This well-known fruit of the *Cocos Nucifera*, one of the most common species of the palm tribe, cannot be recommended for family eating; it is very nice, but very indigestible, being rendered so by its oily nature and solidity of structure; it might probably be not so objectionable on this score, if pulped, or made into flour, but this, we apprehend, would detract from the flavour. The juice, or milk, as it is called, is, when fresh and sweet, wholesome enough, but we seldom get it so. It is described by travellers as most delicious, when drunk fresh from the tree in the hot countries where it is produced, being at once sweet and acidulous.

COCTION (Latin *coquo*, to digest). The process of reducing the aliments to *chyle*, (which see,) and *Digestion*.

CODEIA. One of the alkaloids obtained from *Opium* (which see); when used, which is seldom, being much weaker than *Morphine* (which see), it is in the form of Syrup, the dose of which is about a drachm; its chief employment has been in *Hooping Cough* (which see).

COD LIVER OIL. This oil is prepared from the liver of the Cod fish, and some other allied species; it has of late years come into very extensive use as a therapeutic agent; it was formerly of good repute in the treatment of rheumatism, but being extremely nauseous, never obtained general acceptance; this objection is, in a great measure, obviated by the present improved methods of preparation, and the best Cod Liver Oil, being almost colourless, and free from taste or smell, except a slight fishy impregnation, may be taken by the most delicate stomach. For the revival of its use in this country, we are chiefly indebted to Dr. Hughes Bennett, of Edinburgh, who, in 1841, employed it as a curative agent in pulmonary consumption, over which it appears to exert a specific action. Since that time it has continued to advance in the estimation of the profession and of the public; and, certainly, its effects in some cases have been truly marvellous: consumptive patients, apparently on the brink of the grave, have experienced quite a renovation under its influence; the sunken cheeks have again become plump and tinged with the hues of health; the dim eyes have shone with their former brightness, and the dark rim around them has disappeared: the emaciated frame has gathered flesh, and the weak vacillating step has grown firm and steady as of old. Such, we say, has been the effect in *some* cases; in very many, if not so marked, it has proved decidedly beneficial; so that the dicta of Dr. Williams—"we must pause ere we in future pass the terrible sentence of 'no hope' on the consumptive patient," is in no want of confimation. There is some difference of opinion as to whether Iodine, Bromine, or Phosphorus, all of which are contained in Cod Liver Oil, is the peculiar principle which renders its operation so beneficial in arresting the progress of tubercular destruction of the lungs, in giving firmness to the muscles, and filling up the decayed tissues with adipose matter; but probably all three have a share in the effect produced. In all diseases connected with a scrofulous habit of the constitution, this Oil has been used with great advantage; in general debility, its decidedly nutritive properties render it extremely valuable; and in atrophy, or wasting of the flesh in children, where the glands of the belly are knotted and hard, and the veins enlarged, it often effects a cure: in such a case it is given internally, about a tea spoonful twice a day, and also rubbed into the skin of the stomach three times a day.

The common dose of Cod Liver Oil for an adult is one tablespoonful, two or three times a day; sometimes double this quantity is given, but it is always advisable to begin with a small dose, and gradually increase. With regard to the best vehicle for its administration, this must depend greatly upon individual taste; but Milk, Orange Wine, Ale, or some bitter infusion, Cinnamon, or other aromatic water; and cold Coffee may be mentioned as among the best; for children it may be made into an emulsion with yolk of egg and sugar, or disguised in well sweetened Cocoa, in which state it is sometimes taken unknowingly; Raspberry Vinegar is not a bad vehicle. About an hour before a meal is the best time for taking this Oil; it is then less likely to cause nausea, and more likely to become assimilated with the food. Patients, who have become accustomed to it, experience a sensation of sinking and faintness when the usual dose is omitted, which fully bears out its character as a nutrient; with some it acts slightly as a laxative, and with others causes a difficulty of breathing, and a feeling of fulness in the chest and head, and even spitting of blood; but these effects are quite exceptional.

Medical professors are by no means agreed as to whether the pale or dark oils are the best; the former appears to contain the largest quantity of iodine, bromine, phosphorus, and salts of lime, soda, and m
nesia; and the latter to be richest in
component parts of bile, butyric, and ac
acids: the pale is less likely to cause nau
if it is really fresh and pure, so that i
more generally preferred; although
prepared under the direction of Dr.
Jongh, which is of a light orange col
may be highly recommended as containi
large proportion of the peculiar princi
which render this Oil so valuable, and e
cially of *Iodine* (which see).

CŒLIA (Greek *koilia*, the belly). H
we have *cœliac*, a term applied to an ar
which is the first branch of the aorta ir
abdomen; and

CŒLIAC PASSION. A kind of chronic
in which the aliment is ejected in a
digested state: the symptoms are pair
the stomach, distension of the intes
with wind, white stools, and great
haustion. The *treatment* is first an er
and cathartic to clear the stomach,
warm tonics and carminatives; or, if
bowels continue relaxed, opiates and ab
ents. Some consider this a kind of *Col*

COFFEE. The berries of the *Coffea*
bica, and other plants of the natural
Rubiaceæ, from which, in a roasted s
the well-known beverage is prepared, w
goes by this name. It is a tonic and st

lant, and possesses exhilarant and anti-soporific properties which render it highly valuable in cases of poisoning by opium, alcohol, and other stupifying or narcotic poisons; it has also been found useful in hooping cough and asthma, and is a good vehicle for the administration of quinine and sulphate of magnesia, concealing very much the bitter and nauseous taste of those medicines. Coffee should not be taken where there is an over abundant secretion of bile, as it stimulates the system too much, and causes headache and other disagreeable symptoms; it is far more nutritious than tea, and is therefore a better beverage for the poorer classes: it exerts considerable influence over the brain and nervous system, and if taken too strong, and too frequently, as it often is by literary men, and others accustomed to mental occupation, it is likely to do mischief. Those who from inclination, or inability to purchase meat, live chiefly on unazotised or vegetable food, should certainly take Coffee, a strong cup of which is considered a good protection from the effects of malaria; it is more suitable for a morning beverage than tea, because t is less likely to affect the nervous functions. Coffee should be used freshly ground, and only infused in boiling water, never boiled; for invalids it may be made with half milk, and in this way, if not too heavy for the stomach, will prove nutritious.

The peculiar aroma of Coffee consists in an essential oil, of which it contains a large proportion; but its active principle lies hiefly in an alkaloid, called *Caffeine* (which ee), and this is identical with *Theine*, the alkaloid of *Tea* (which see). When administered to counteract the effects of poison, Coffee should be fresh, pure, and strong, without milk or sugar: the hot infusion of . ounce of the ground berries to be taken about every twenty minutes. In their raw tate, the berries possess febrifuge properties and are prescribed medicinally, most frequently for *Hemicrania* and *Intermittent Fevers* (which see): the dose is a scruple of the powder given every hour during the ntermission of the attacks; it is also given n the form of a strong decoction, sometimes combined with Lemon juice. The negroes n the West Indies take an infusion of the raw berries to promote a flow of urine. For the sophistications of coffee, see *Adulteration.*

Cohesion (Latin *cohereo*, to stick together). The power by which the component parts of a body cohere or keep together; it is the opposite of *Expansion*, (which ee), and *Healing*, *Wounds*

Coitus (Latin *coire*, to go together). The conjunction of two sexes. See *Copulation.*

Colchicum. The seeds and bulbs of the *Colchicum Autumnale*, a plant of the natural order *Melanthaceæ*, which grows in this country in most meadows, and is commonly called Meadow Saffron, are much used in the medical treatment of acute and chronic rheumatism, on which they appear to exert a specific effect. For non-inflammatory affections generally, colchicum has of late been much administered; it is strongly irritant, diuretic, and purgative, and should be used very cautiously. It has been recommended in gonorrhœa, with Tincture of Opium, low diet, and warm baths. On the continent it has been extolled as a remedy for dropsy and humeral asthma. Its principal forms of administration are Vinegar of Colchicum, dose 30 to 90 minims; Oxymel and Syrup 1 to 2 drachms; Extract, ½ a grain to 2 grains; Acetic Extract, the same; Tincture, ½ a drachm to a drachm; Wine, 15 minims to a drachm. Vinegar and Wine appear to be the best menstrua for extracting the properties of Colchicum, which is the active principle of most nostrums sold as infallible

remedies for Gout and Rheumatism. One of them is Dr. Wilson's Gout Tincture; and another, very popular in France, is called *Eau Medicinale de Husson.* The following is its form of preparation:—Macerate 2 ounces of fresh Colchicum root, cut in slices, in four fluid ounces of Spanish White Wine; filter, and take from 20 to 30 minims twice a day. Old authors recommend the Meadow Saffron for gout, under the name of *Hermodactyllus.* The juice of the bulb is very poisonous to dogs; hence its Dutch and French names—*Hundes hoden*, and *Tue-chein.*

Cold, as applied to temperature, may be defined as the absence of heat, or, more properly, *Caloric* (which see); also *Temperature.* The use of cold, in the treatment of disease, has long been known and highly valued. On the system generally it acts as a bracing tonic, strengthening and invigorating the frame. In certain forms of inflammatory disease, and where there is undue excitability of any organ, the application of cold is attended with the most beneficial effects. That of ice is generally applied, when the ice itself can be procured, but a very low temperature may be produced by various evaporating lotions made with spirits, &c., and other constituents: one of the most useful and easily procured is a compound of Muriate of Ammonia, commonly called Sal Ammoniac, and Nitrate of Potash, or Saltpetre, of each of these ½ an ounce added to a quart of water fresh from the spring or well, should the weather be warm. The best spirit to use is Ether, next to that Pure Alcohol, but any strong spirit will produce the effect; moisten a piece of lint with it, and lay it over the part affected. See *Refrigeration.*

Cold can scarcely be spoken of as a disease, although it is the prolific source of many diseases, and a large proportion of the cases which the family doctor is called in to treat are termed colds, under which generic term, if we may so speak, are included *Catarrh*, *Influenza*, bronchial affections, and the incipient stages of *Bronchitis* (all of which see). As to the results of a cold, were we to particularize these, we might include fevers, rheumatic affections, and half the diseases to which the flesh is heir. In this climate, more especially, with its sudden changes of temperature, and variations in the condition of the atmosphere, persons are very liable to "catch cold" as it is called, and generally speaking, far too little care is taken to guard against this liability, and the effects of a "slight cold" when it is contracted.

The *symptoms* of a cold are familiar to most persons, for there are few who have not experienced them; as a general rule the *treatment* should be avoidance of exposure to out-of-door atmospheric influences, unless the weather be very fine and mild; warm diluent drinks and diaphoretics at night to promote perspiration, with the use of the foot bath. The saying runs "feed a cold and starve a fever" but this is not always the safe course; if there is an absence of febrile symptoms, which is rarely the case, a warm nourishing diet may be the rule, and medicines may be pretty nearly dispensed with, but if these symptoms are present, the system must be reduced by low diet and aperient medicines; 2 grains of Calomel with ten grains of Dover's Powder should be given at bedtime, and a Senna draught in the morning, taking, during the day, a mixture like this: Sulphate of Magnesia, 2 drachms; Sweet Spirits of Nitre, 2 drachms; Wine of Tartarized Antimony, 1 drachm; Liquor of Acetate of Ammonia, 6 ounces; take a tablespoonful every four hours. A high medical authority has recently recommended *a total abstinence from liquids;* he says:—"To those who have the resolution to bear the feelings of thirst for thirty-six or forty-eight hours, we can promise a pretty certain and complete riddance of their colds; and, what is perhaps more important, a prevention of those coughs which commonly succeed them. Nor is the suffering from thirst nearly so great as might be expected." It is Dr. C. J. Williams, who writes thus:—"We have never witnessed any evil from this abstinence from liquors for the time prescribed; but it is not unlikely that it may do harm in persons with irritable stomachs; or in those liable to urinary disorders. Moderation in liquid food is one of the best preventives against the bad effects of exposure to cold. When there is a large quantity of liquid in the system there must be increased perspiration, and, therefore, greater risk from the effect of cold." We mention this new light thrown on the subject of treatment for cold, without fully recommending its adoption, having tested the opposite method and found it efficacious; it might do in some cases, but not, we apprehend, in the great majority. For directions for the treatment of cough and other concomitants of cold, see *Cough.*

Cold Cream. This agreeable and cooling application, so useful for chapped lips and hands, and other excoriated surfaces, may be prepared in several ways; the following is, perhaps, as easy and as good as any :—Melt four ounces of White Wax in a pound of Almond, or pure Olive Oil, and, when it begins to cool, mix gradually with it a pint of Rose or Elder Flower water, if the latter, add about 12 drops of Otto of Roses, or any other perfume which may be agreeable ; if the former, the like quantity of Essence of Bergamot; the mixture must be kept constantly stirred until cold, or the oil and water will separate ; if properly managed it will be perfectly smooth, nearly white in colour, and about the consistence of thick cream ; it should be kept in covered pots, with a piece of tinfoil between the lid and the pot.

Colic, is a disease, of which nosologists enumerate seven distinct species ; these are, 1. *Spasmodic*, accompanied by retraction of the navel, and spasms of the abdominal muscles (see *Cholera) ;* 2. *Stercoracious*, resulting from costiveness after long continued *Constipation* (which see) ; 3. *Accidental*, from acrid matter in the intestines; 4. *Painter's*, or *Devonshire* Colic (*C. Pictorium*), also called *Saturnina*, because the effects of lead, and Dry Belly Ache ; 5. *Meconial* Colic, affecting new-born infants and resulting from retention of the *Meconium* (which see) ; 6 *Calculous* Colic, a fixed hardness in some particular part of the abdomen, resulting from the formation of *Calculi* (which see) ; 7. *Verminous* Colic, resulting from *Worms* (which see).

The *symptoms* of colic, in general, are a painful distension of the lower region of the belly, with a twisting round of the navel, and very commonly vomiting, costiveness, and spasms. Among the most frequent causes may be named worms, poisonous or unwholesome substances, long undigested food, redundancy of vitiated bile, internal gout and rheumatism, intense cold, hard or acid fruits or vegetables.

The *treatment* must depend greatly upon tho cause, thus in *Bilious* Colic, where there is loss of appetite, bitter taste in the mouth, great thirst, fever, costiveness, and vomiting, with spasmodic pains, mercurials and purgatives must be administered, with effervescing draughts, fomentations and friction. If the symptoms become violent and inflammation of the intestines appears likely, bleeding by the lancet or leeches may be resorted to, especially if the patient bo young and plethoric. In *Flatulent* Colic, where there is costiveness, pain, soreness, and griping of the bowels, rumbling and distension, with inclination to vomit, and coldness of the extremities, the administration of aromatic cordials, with opiates and purgatives, warm applications to the stomach, and antispasmodic clysters ejected every three or four hours; bleeding, as above, if inflammation is threatened. In *Hysteric* Colic where there is nausea, spasms, costiveness, and great dejection of spirits, the proper course will be laxatives, if required, with Spirits of Ammonia, Sulphuric Ether, and after the bowels have been evacuated, Camomile Tea, or other bitter infusion, with a little anodyne. Turpentine clysters have been also found useful.

Although Colic is properly a painful affection of the colon, *without* inflammation or fever, yet it is frequently accompanied with febrile and inflammatory symptoms, and often results in *inflammation of the bowels*, (which see) ; it may generally be distinguished from actual inflammation by the spasmodic contraction of the abdomen, the absence, or trifling degree of fever and insensibility to pressure, and also by the state of the pulse.

For Lead, Painters', or *Devonshire Colic*, so called because it formerly prevailed in Cyder counties, where leaden vessels were much used in the manufacture of the beverage, the same general remedies may be used as for other forms of colic : for the palsy, arising from the absorption of lead, which is generally confined to the wrists, galvanism, friction, and shampooing, with Bath, or other chalybeate waters. Those engaged in the manufacture of lead, or in occupations in which one or other of its preparations are frequently handled, may generally escape its baneful effects by strict attention to cleanliness ; they should never take their meals where they work, or with unwashed hands ; let them eat fat meat, and butter, and acidulous drinks, especially those rendered so by Sulphuric Acid : the men employed at the Birmingham white-lead works have been almost free from this disease, to which they were much subject before, since they have mixed a little of the above acid with their treacle-beer. From the first attack of Lead Colic, patients generally recover ; but unless they change their occupations, or observe the above precautions with scrupulous care, the attacks are repeated, each time with greater violence, and they become, eventually, miserable cripples.

Collapse (Latin *collabor*, to shrink down). A failure, more or less sudden, of the circulation, or the vital power, as of the brain, or of the whole system. This occurs in some diseases which are immediately dangerous to life, such as *Cholera*, *Typhus Fever* (which see).

Colliquamentum. A term applied by

Harvey to the first rudiments of the embryo in generation. From the same root comes also *Colliquative*, any excessive evacuation, as *Diarrhœa*, or *Perspiration* (which see).

COLLUM. (Latin for the *neck* (which see), also *Cervix*.

COLLYRIUM (Greek *kolyo*, to stop, and *rous*, a running). A wash for the *Eye* (which see).

COLOCYNTH. Bitter Apple or Cucumber, a plant of the natural order *Cucurbitaceæ*, called by botanists *Citrullus Colocynthus*, the decorticated fruit or pulp of which is a drastic purgative; it was used by the ancients in dropsical and lethargic diseases, but is now principally given in habitual constipation, in affections of the brain, as a revulsive, and in various diseases where an active purgative is required. In small doses it is expectorant, diuretic, and alterative; in over doses poisonous, producing excessive irritation of the mucous membranes; the dose of the Powder is from 2 to 8 grains; in this form it is seldom given; of the Pill, or Extract, from 5 to 10 or 15 grains; it should never be given without some aromatic, to correct its griping tendency, and to effect this object, is sometimes triturated with gummy farinaceous substances. A watery decoction, or infusion, has been recommended as less drastic than any other form of administration, and as especially good for worms, but this is not often used. *Colocyntine* is the active principle of this drug. See *Purgatives*.

COLOSTRUM. The milk first secreted after delivery.

COLPOCELE (Greek *kolpos*, the *vagina*, and *kele*, a tumour). A tumour or hernia in the *vagina* (which see).

COLPOPTOSIS (Greek *kolpos*, and *ptosis*, a falling down). Prolapsus of the *Vagina* (which see).

COLTSFOOT (Latin *tussis*, a cough). This is a common English plant, whose powerfully expectorant qualities, have rendered it celebrated as a remedy for coughs; hence its Latin name derived from the above root. *Tussilago farfara* is the botanical designation of the common Coltsfoot, the whole of which abounds in mucilage; it is slightly bitter, having tonic as well as demulcent properties: the common form of administration is that of a Decoction made by boiling a handful of the leaves in two pints of water until reduced to a pint; sweetened with a little Sugar-candy, and acidulated with a slice or two of Lemon, this is a very pleasant and useful drink; a wineglassful may be taken three or four times a day.

The Syrup of Coltsfoot is much given by French physicians for chronic bronchitis. The herb boiled in Milk is good for consumptive patients with distressing coughs.

COLUMNA (Latin for a column). Applied to the *columnæ carneæ*, or muscular fasculi of the heart, and to some other parts.

COLZA OIL. This is extracted from the seed of the *Brassica arvensis*, a well-known species of cabbage; this oil is used in the manufacture of soft soap, and also to burn in lamps.

Coma (Greek *keo*, to lie). Drowsiness, a state of insensibility resembling sleep, from which the patient cannot be aroused, or only to partial sensibility; this is generally the result of pressure on the brain, it may be from the effusion of watery fluid, or of matter, or, perhaps, the bone of the skull depressed by some external injury. This is called a *comatose* condition, and it exists in narcotic poisoning, in apoplexy, &c., and complete intoxication by alcoholic stimulants. Between Coma and fainting there is this marked difference: in the former, the action of the heart continues sufficiently perceptible; in the latter, not so. Two distinct forms of Coma are recognized by the faculty—viz., *C. Somnolentum*, in which the patient, when roused, immediately relapses; and *C. Vigil*, in which he is unable to sleep, although so inclined. For *treatment*, see *Apoplexy*, *Intoxication*, *Poisoning*.

Comminuted (Latin *comminuo*, to break in pieces). This term is applied to a fracture in which the bone is broken into several pieces. See *Fracture*.

Commissure (Latin *committo*, to unite). A joint or seam; in anatomy applied to the parts which unite the hemispheres of the *Brain* (which see).

Complexus (Latin *complector*, to comprise). A muscle situated at the back part of the neck. See *Muscles*.

Compound Medicines. These have been divided into two classes—viz., *Officinal Preparations*, or those ordered in the several Pharmacopœias; and *Magistral*, or *Extemporaneous Formulæ*. See *Medicines*.

Compress (Latin *comprimo*, to press). A piece of folded linen or lint, placed by the surgeon generally under a bandage, where he wishes to make a *pressure* (which see).

From the same root comes also *compression* and *compressor*; the former term being generally applied to a diseased state of the *Brain* (which see); and the latter to a muscle which compresses a part, as that of the *Nose* and the *Urethra* (both of which see).

Concentration (Latin *concentro*). The strengthening of mixtures, solutions, &c., by getting rid of their watery parts; this is usually done by *Evaporation* (which see).

Conception (Latin, *concipio*, to conceive). The first stage of generation on the part of the female. See *Generation*.

Concha (Latin for a shell). A term applied to parts which resemble a shell, as *C. Auris*, the cavity of the ear; and *C. Naris*, the turbinated portion of the ethmoid bone.

Concretion (Latin *concresco*, to grow together). A term usually applied to the formation of stones in the intestines. See *Calculus*.

Concussion (Latin *concutio*, to shake together). This term is usually applied to injuries sustained by the brain and other viscera. See *Brain*, &c.

Conductor (Latin *conduco*, to lead). A grooved instrument used by surgeons to pass into a diseased part, by which to direct the operating knife, sometimes called the *Director* (which see).

Condyles (Greek *kondylos*, a knuckle). Rounded eminences in the joints of several bones, as the *humerus* and *femur* (which see). From the same root comes also *Condyloid*, a term applied to some of the openings of the occipital bone, through which the veins of the neck pass. *Condyloma*, a wart-like excrescence which appears about the *Anus* and *Pubendum* (which see).

Confections (Latin *conficio*, to make up). Under this name are comprehended several medical compounds, including, according to the London Pharmacopœia, the *Conserves* and *Electuaries* (which see); strictly speaking, however, these are not true confections, of which we give a list of the principal in use:—1. *C. Amygdalarum* (C. of Almonds); 2. *C. Aromaticum* (Aromatic Confection); 3. *C. Aurantiorum* (C. of Seville Orange); 4. *C. Cassiæ* (C. of Purging Cassia); 5. *C. Opii* (Confection of Opium); 6. *C. Piperis Nigri* (C. of Black Pepper), commonly called Ward's Paste, for Fistula; 7. *C. Rosæ Caninæ* (C. of Dog Rose); 8. *Rosæ Gallicæ* (C. of the Red Rose); 9. *C. Ruta* (C. of Rue); 10. *C. Scammonii* (C. of Scammony); 11. *C. Sennei* (C. of Senna), Lenative Electuary; the composition and properties of these are all spoken of under the several heads of their principal components.

Confluent (Latin for to flow to). Applied to a form of inflammatory disease which spreads rapidly over the surface of the skin, as confluent *Small Pox* (which see), also *Variola*.

Congestion (Latin *congero*, to amass). Applied to undue fulness of the blood-vessels: those of the brain are most usually so affected, owing to the unyielding nature of the bones of the cranium, which do not admit of expansion for any increased quantity of blood which may flow in. Most of the other important viscera are contained in cavities with yielding walls; and, in them, a greater fulness of the veins than usual is not generally attended with such dangerous effects.

The *cause* of congestion may be anything which impedes the whole circulation so as to increase the action of the heart; any pressure on the veins which obstructs the passage of the blood through them; a dilation of the coats of the veins from debility; cold applied to the surface of the body, or a dry state of the skin; a decay of the cells in the small secreting cavities, blocking them up, and thus causing local congestion, which, if not relieved, may lead to that of the whole system. See *Brain*, *Chilblains*, *Hypertrophy*.

Congius. A measure capable of containing a gallon, or eight pints.

Conglobate (Latin *conglobo*, to gather into a ball). Applied to a gland of a globular form, like those of the absorbent system. See *Absorbents*, *Glands*.

Conglomerate (Latin *conglomero*, to heap together). A cluster of glands, as the *Parotid*, *Pancreas* (which see).

Conium. Common Hemlock (Latin *Conium maculatum*. See *Cicuta*, *Hemlock*.

Conjunctiva (Latin *conjungo*, to unite). The lining membrane of the posterior surface of the eyelids which is continued over the fore part of the globe of the *Eye* (which see). *Conjunctiva Granular* is a diseased condition of this membrane: it usually follows purulent *Opthalmia* (which see).

Conserves (Latin *conservo*, to keep). A composition of fruit or other vegetable matter and sugar; the conserves used medicinally will be found under the head of *Confections*.

Constipation (Latin *constipo*, to crowd together.) Habitual confinement of the bowels, which is produced from want of tone in the muscular coat of the stomach, or a tendency to absorb the fluid elements of the fœces, so that they are left in too solid a form for the muscles to act upon; the latter is more commonly the case. See *Costiveness*.

Constituens (Latin *constituo*, to dispose). A constituent part of a medicinal formula, being that which imparts a convenient or agreeable form; the vehicle. See *Prescriptions*.

Constitution (same root as above). This is—first of the body, meaning the condition of the body; the *propria*, or individual peculiarities, as distinguished from the *communia*, or qualities which are common to all: thus we say, this or that man's constitution, as something distinct from that of the human race generally. (See *Diathesis*). Second, the constitution of the air, meaning the peculiar state of the atmosphere, or vapours arising from the earth, in relation to their effects upon the health of man, according to which they are denominated Bilious, Dysenteric, &c. See *Atmosphere*, *Epidemics*, &c.

Consumption (Latin *consumo*, to waste away). A wasting of the body, resulting generally from disease of the lungs, in which case it is called Pulmonary Consumption or *Phthisis*, (which see); for an account of that form of the disease called Nervous Consumption, (see *Atrophy*).

Pulmonary disease prevails in England to a greater extent than perhaps in any other country; as many as 70,000, it has been stated upon good authority, die annually of this alone. The impression is generally entertained, that the variableness of the climate, and the prevalence of damp and fogs is the chief cause; this may be, to some extent, true, but much is owing to hereditary predisposition, how acquired we need not pause to inquire, amid the unfavourable circumstances as to ventilation, diet, clothing, &c., in which a large proportion of our population live. The formation of tubercles on the lungs may arise from various causes; where there is predisposition, the most trifling exposure to cold or damp, the least deviation from the rules of health, will frequently develope tho disease; and even where there is not, it requires but little to set it up; and this is the case, not only in England, but all through Europe: it is found that in the German, French, Italian, and other Continental hospitals, consumptive cases form as large a proportion of those treated as they do with us. Among the most general of the predisposing, or exciting *causes*, may be mentioned, in addition to the hereditary taint already spoken of, a scrofulous habit of body, a peculiar formation of the chest compressing the space appropriated to the lungs, so that they cannot have free play; this is sometimes the result of artificial compression, against which we cannot raise our voice too loudly, or too often, (see *Stays*, *Tight Lacing*). Inflammation of the lungs, catarrh, syphilis, king's evil, small pox, measles, or any disease which has a tendency to impair the quality of the blood, or weaken the system, may be classed among the causes of Consumption; as may certain employments which necessitate the breathing of an atmosphere loaded with impurities, causing irritation of the pulmonary passages, which is likely to extend to the lungs themselves, and initiate tubercular disease. Previous to the invention of magnetic guards for the mouth, which attract the minute particles of steel dust, and prevent their entering, needle grinders seldom attained to the age of forty years; and it is now found that hair dressers, bakers, millers, masons, bricklayers, laboratory men, coal-heavers, chimney sweeps, dressers of flax and hemp, and workmen in leather warehouses, are all especially liable to pulmonic disease. A slight cough resulting from a cold caught by sitting in a draught, or getting wet, or wearing damp linen, will if neglected often become worse, and eventually lead to Consumption. So too will scrofula, with which a large proportion of the ill-fed, ill-clad, and worse-housed lower classes are affected. It has been noted, that soon after scrofulous eruptions have disappeared from the surface of the skin, symptoms of Phthisis have shown themselves, a clear indication that the disease had retreated to the lungs, which would appear to be its internal stronghold.

The *symptoms* of Consumption, although they vary somewhat with the cause of the disease, yet have a general similarity in their character. There is at first langour and a sense of debility. On the slightest exertion the pulse becomes accelerated, and the breathing difficult; there is often a short, dry cough, which increases in strength and frequency. At first there is little or no expectoration, but gradually this comes on, and eventually becomes copious, the thick mucus being after a while streaked or tinged with blood. There is gradual emaciation of the body and loss of strength; then come night-sweats, disturbed rest, and a hectic flush, or spot on the cheek—constant thirst, and a cough which seems to gather strength, in proportion as the frame, which it racks and tears, becomes more and more attenuated. There is at first a sense of tightness on the chest; then, as the respiration becomes more laboured, succeed sharp, cutting pains, particularly under the sternum, or breast-bone, and at the time of coughing; very commonly the mind partakes of the weakness of the body, and sinks into a desponding state, or has sudden alternations of hope and fear, clinging, however, frequently to the latter until life is extinct. The termination of the sad scene is commonly brought about by the rupture of one or more of the blood-vessels of the lungs in a fit of coughing; hœmorrhage ensues, and the patient sinks exhausted, to add another to the long catalogue of victims to consumption.

Is the disease curable? We must answer, sorrowfully—No! If taken in the earlier stages, its progress may probably be arrested; and, with great care, where there is known to be hereditary predisposition, it may possibly never be developed at all; but when the tubercles are formed, and suppuration has commenced, the cough become distressing, and the expectoration considerable—although by the application of certain remedies, a removal to a mild climate, and a careful guarding against all adverse influences, the progress of the disease may be for a time arrested, and so the life prolonged—yet we hold a perfect cure to be impossible: the disease is not dead, but sleeping, and may at any moment awake, and advance with rapid steps to the completion of its fearful work.

CONTABESCENTIA (Latin *contabesco*, to waste away), a gradual loss of flesh. See *Atrophy*, *Consumption*.

CONTAGION (Latin *contingo*, to touch one another). Properly speaking, those are contagious diseases which are propagated by actual contact, as in the case of the *Itch* (which see); or by inoculation, as the *Cow-pox* (which see); but the term is now generally used in its more extended meaning, of *infection* (which see). Most of the diseases which are contagious are infectious also; that is, they are propagated through the atmosphere, whose impurities would seem to be the soil, if we may so speak, on which the seeds of disease are carried hither and thither, and deposited wherever a suitable receptacle can be found; that is, wherever there is a human system in such a condition as to predispose it to receive the calamitous visitation. That peculiar atmospheric conditions favour the propagation of contagious disease, there can be no doubt, and not always are they appreciable; certain electrical disturbances, a superabundance of heat and moisture, bad smells arising from cesspools, open ditches; and accumulations of decayed animal and vegetable matters, are all favourable to contagion, which may be hidden in articles of dress and furniture in a latent state, and after a time work with deadly effect upon those with whom these articles come in contact.

FOMITES is the name which has been given to materials impregnated with contagious diseases; wool or cotton, or any loose texture appear to be peculiarly adapted for such impregnations, and they have been known to propagate the disease after a long period, hence the danger of buying second-hand clothes, bedding, carpets, sofas, or other articles of that description; hard and polished substances are not likely to serve as fomites. It will be evident from this, that from the chambers of persons suffering from Small Pox, Malignant Fevers, &c., all superfluous drapery or clothing should be removed, and on the recovery or death of the patient, care should be taken that the room should be thoroughly cleaned, and every article, if not destroyed, be subjected to a course of purification, first by washing, next by fumigation with *Chlorine* (which see) and lastly by a lengthened exposure to light and air. A temperature of 212° Fahrenheit, to which textile fabrics may be subjected without injury, is said, on the authority of the late Dr. Hardy, of Manchester, to destroy the power of propagating contagious disease in fomites; a baking process may be recommended for such articles. Glazed calico dresses may also be recommended for the attendants on sick persons; and in chambers after the death or removal of a patient, the walls should be scraped and freshly lime-washed, if not papered, and if they are, the old paper should be taken down, and fresh put up; Chlorine also should be diffused through the apartment for several days or nights in succession. Where Chlorine cannot be procured, the steam of Vinegar thrown upon red hot iron, or live coals, the fumes of Muriatic Acid, and the absorbent properties of Quick Lime may be employed, but they are not to be greatly depended on. See *Disinfectants*, &c.

CONTRACTIBILITY (Latin *contrao*, to draw together). 1st. meaning—The property by which the fibrous tissues, after having been temporally extended, return to their former position. 2nd. The property by which they contract on the application of a stimulus; this last should perhaps be called *Irritability*, (which see.) From the same root comes *Contraction*, a rigid state of the joints.

CONTRAYERVA. The root of the *Dorstema Contrayerva* is tonic, stimulant, and diaphoretic, and was formerly much administered in low and malignant fevers, in exanthematis and debility of stomach, and even regarded as an antidote to poisons; the aqueous Decoction is mucilaginous, and, containing no astringent matter, is not affected by salts of iron, for which it forms a good vehicle; the dose of the Powdered Root is from 5 to 30 grains; there is also a Compound Powder, which is made up into round lumps, and sold as Contrayerva Balls, much given to children in the fever and dysentery, which often accompany dentition.

CONTRA-FISSURE (Latin *contra*, against, and *findo*, to cleave). A fracture of the skull, produced by a blow, opposite to the part on which the fracture takes place.

CONTRA-INDICATION (Latin *contra*, and *indico*, to draw). Circumstances which forbid the administration of remedies.

CONTUSIONS (Latin *contundo*, to bruise.) See *Blow* and *Bruise*.

CONVALESCENCE (Latin *convalesco*, to grow strong.) The state of recovery from *Sickness*, which see.

CONVOLUTA (Latin *convolvo*, to roll together). A term employed for the upper and lower turbinated bones of the *Nose*, (which see); hence, too, we have *Convolutions*, applied to the windings and turnings of the cerebrum, and to the foldings of the small intestines.

CONVOLVULUS (same root as above). One of a genus of plants of the natural order *Convolvulaceæ*, in which we find two well-known emetic purges, viz., *Jalap* and *Scammony* (which see).

CONVULSIONS (Latin *convello*, to pull together). Involuntary contractions of the muscles of a part or the whole of the body; generally with corresponding relaxations, but sometimes with rigidity and tension: in the former case, they are called *clonic* spasms, as *Hysteria;* in the latter, *tonic spasms*, as *Lock Jaw;* when the convulsions are slight and rapid, they are called *Tremours* (which see). They are universal, affecting all the limbs more or less, and the muscles of the face and those of respiration, as in epilepsy, and the convulsions of children; and partial, when they only affect some of the muscles irregularly as in *Chorea* or *St. Vitus' Dance* (which see).

The chief *symptoms* of convulsions are violent spasmodic affections, with or without intermission; previous to their coming on there is generally giddiness, coldness of the extremities, dimness of vision, tremblings, and a creeping chill up the spine. When the fit is on, the teeth chatter, the tongue is protruded and often bitten, there is foaming at the mouth, the eyes roll wildly, there is a struggle for breath, and a clutching of the hands, which are often clenched so that the nails enter into the flesh; sometimes the lips and cheeks and the whole surface of the face and arms become purple, and the veins stand out as though they would burst; and so great is the muscular force exerted that several attendants are required to keep the patient from bodily injury. A violent paroxysm may last but a few minutes only, or for several hours, and may have longer or shorter intermissions. It is followed by extreme languor, frequently by head-ache and giddiness, but these often pass off very quickly and leave no symptoms of constitutional derangement whatever.

The *causes* of convulsions in children are generally the lodgement of acrid matter in the intestines, flatulency, the irritation of teething, worms, water on the brain, the striking in of a rash, or the accession of some disease, such as small pox, scarletina, &c. A very trifling functional derangement will often be sufficient to produce them, and the younger and the more irritable the child is, the more liable will it be to their attacks.

The proper *treatment* will depend greatly on the cause: if it be worms, give *Vermifuges* (which see) and *Anthelmintics;* if teething, scarification of the gums; if improper food and indigestion, a gentle emetic and afterwards an aperient; if acrid matter in the bowels, a laxative clyster and aperient; if flatulency, carminatives; if repelled eruptions, the warm bath; if effusion on the brain, cold lotions to the head, and small doses of Calomel, frequently repeated, with purgatives, if the bowels are sluggish; hot applications to the extremities, also, are advisable in this case, and sometimes leeches to the head; but it is hazardous to apply them, except under professional direction. In all cases of infantile convulsions, and in some of adults, the warm bath is advisable; the temperature should be about 98°, and in most cases opening medicines, with at least one dose of Calomel put on the tongue.

In adults, convulsions may be apoplectic, epileptic, hysterical, or puerperal, as the case may be, and the treatment is described under those particular heads. Some narcotic poisons produce them, such as Opium, Prussic Acid, some kinds of Fungi, Ardent Spirits and indigestible substances. In all these cases, emetics would be the first remedies, and the stomach-pump; then volatiles and stimulants, as Ammonia, Valerian, and a stream of cold water poured upon the head from a considerable height. Convulsions may be caused by excessive mental emotion and sometimes by long continued diseases, such as *Dropsy*, *Jaundice*, and *Fever* (which see).

Copaiba or **Copaiva**, sometimes called **Copivi.** A balsam, or a resinous juice, procured by incisions in the bark of the *Copaifera Multynga*, and other species of the order *Leguminoseæ.* It is strongly diuretic, and stimulates the mucous membranes generally; in large doses laxative, and is commonly given in diseases of the urinary organs, especially gonorrhœa; it is also useful in chronic affections of the chest, and hœmorrhoids, or *Piles* (which see). It may be applied externally with advantage to chilblains and indolent ulcers. The dose is from 10 to 60 minims, in plain or aromatic water, Bitter Infusion, or Tincture, or any convenient vehicle; to some the taste is extremely nauseous, and may best be got rid of by chewing some Orange Peel after it. An Emulsion of Copaiba is sometimes made by mixing the Balsam with mucilage, yolk of egg, or Liquor of Potash; it should be strongly flavoured with Oil of Cinnamon. There is also an Oil of Copaiba, dose 15 to 20 minims; Syrup, 2 to 8 drachms, and Resin, 10 to 30 grains. Copaiba Capsules are formed by enclosing the Balsam in little vesicles of Gum Acacia; in this manner it may be taken without the objectionable flavour being noticed; the capsules may be bought of any druggist, with directions for use.

Copalchi. A plant called by botanists *Croton Suberosum*, whose bark is sometimes used as a bitter tonic and antispasmodic. Like Cascarilla, it may be administered in atony of the stomach and bowels, and other cases which require aromatic tonics. The dose of the Infusion is from 1 to 2 tablespoonsful thrice a day; Tincture, 1 or 2 teaspoonsful; Extract, 1 or 2 grains.

COPPER (Latin *cuprum*). A native metal, the salts of which, although poisonous, are employed medicinally, being astringent, tonic, and emetic in their operations; externally they are caustic and detergent. The following are the principal of those so used; *Cupri acetas*, and *diacetas*, Verdigris, crystallized and uncrystallized, sometimes known as *Ærugo;* they are scarcely ever used for other than external purposes, the uncrystallized kind entering into the composition of an ointment, *Unguentum Æruginis*, which is applied to foul ulcers to cleanse and stimulate them, and also of a plaster, *Emplastrum Æruginis*, often employed as a corn plaster.

Ammoniated Copper (*Cupri Ammoniæ Sulphas*) is a tonic and antispasmodic; sometimes given in epilepsy, chorea, &c.; the dose is from $\frac{1}{4}$ to $\frac{1}{2}$ a grain gradually increased to 3 grains; there is a Pill of the Edinborough Pharmacopœia (*Pilulæ Cupri Ammoniata*), in which form it is commonly administered, it is also used extensively in lotions and collyria.

Sulphate of Copper *(Cupri Sulphas)*. Generally known as Blue Stone, is a powerful tonic and astringent, given medicinally in doses of $\frac{1}{4}$ to $\frac{1}{2}$ a grain or more; as an emetic 5 grains act very promptly, and it is therefore good in poisoning by narcotics; externally used in astringent and detergent lotions, and applied dry as a caustic to destroy fungoid growths.

Carbonate of Copper *(Cupri Carbonas)*. Prepared by the addition of Carbonic Acid to a solution of the Sulphate, useful as an application to running sores and eruptions in the scalp, &c.

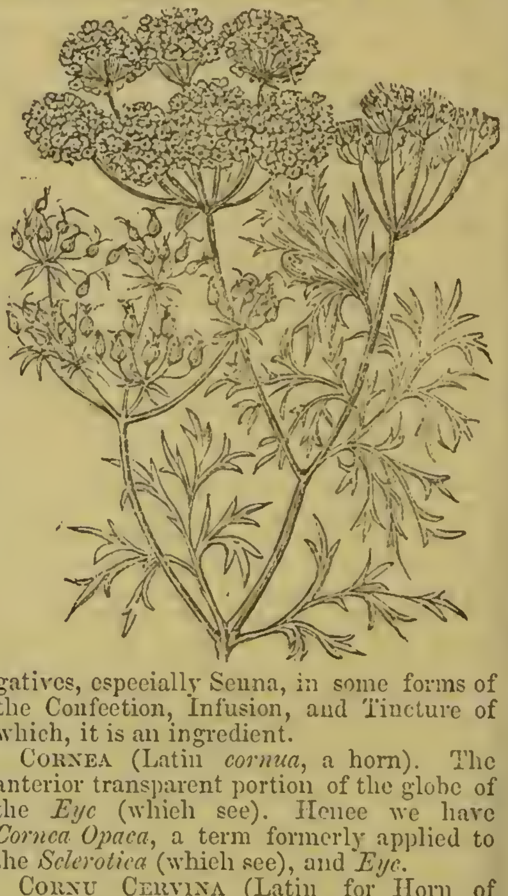
Nitrate of Copper (*Cupri Nitras*). Used only as a caustic.

COPPERAS. Green Vitriol, or Sulphate of *Iron* (which see).

CORACO (Greek *korax*, a crow). Surgical terms compounded of this word are applied to muscles which are attached to the *coracoid process*, which forms the upper and anterior point of the scapula, and is so called from its resemblance to a crow's beak.

CORDIS (Latin *cor*, the heart (which see). From the same root come also *Cordials* or *Cardiacs*, warm medicines (see *Carminatives*); and Core, the inner part of any thing, applied to the hard centre of *Corns* (which see); and to the slough which forms at the bottom of *Boils* (which see).

CORIANDER SEEDS. Produced by the *Coriandrum Sativum*, a plant of the natural order *Umbelliferæ*, is cordial and aromatic in a moderate degree, and is chiefly used to correct the griping tendency of active purgatives, especially Senna, in some forms of the Confection, Infusion, and Tincture of which, it is an ingredient.



CORNEA (Latin *cornua*, a horn). The anterior transparent portion of the globe of the *Eye* (which see). Hence we have *Cornea Opaca*, a term formerly applied to the *Sclerotica* (which see), and *Eye*.

CORNU CERVINA (Latin for Horn of Deer). (See *Hartshorn*). From the root *cornu*, a horn, we have several surgical terms, applied to parts supposed to resemble a horn, as *C. ammonis*, a part of the brain also called *Pes hippocampi;* and *C. uteri*, the appearance of the angles of the uterus in certain animals: also from their horny hardness, *Corns* (which see below); and *Cornea*, the interior transparent portion of the globe of the *Eye* (which see).

CORNS (Latin *cornu*, a horn). There are few persons who have not suffered from these troublesome excrescences, which arise from a thickened state of the outer, or scarf skin, caused generally by the pressure or friction of tight, or ill-fitting shoes; the sensible, that is the true skin, feeling the pressure, endeavours to protect itself by throwing up a sort of defence, which assumes a conical form, having the apex within pressing upon the tender skin, and often causing intolerable pain, and sometimes inflammation to such an extent as to form an abscess at the point.

In the *treatment* of Corns, the first object should be to remove the exciting cause; comfortable, well-fitting boots or shoes, should be substituted for those of an opposite character, and the Corn, after the feet have been soaked in warm water to soften it, should be pared carefully away, particular care being taken not to wound the more sensitive part. When the outer surface is removed, there will be perceived in the centre a small white spot, which should be carefully dug out with a pointed knife or pair of scissors. When this too is removed, cover the seat of the Corn with a small circular piece of thick soft leather spread with Soap or Diachylon plaister, and leaving a small hole in the centre, corresponding with that from whence the root of the corn has been taken. Should any of this latter remain so as to cause irritation, apply to it, every second or third day, a piece of Lunar Caustic, scraped to a point, and slightly moistened. Some persons apply strong Acetic, or other acid; but this is not so effectual, and more likely to cause inflammation, which will be best allayed by a warm poultice of bread crumbs, moistened with Goulard Water, the foot being held up as much as possible, and the system kept in a cool state with saline aperients, &c.

Soft Corns, which form chiefly between the toes, are often very painful and troublesome; let them be cut away as close as possible with a pair of scissors and then dressed with rags wet with Goulard Water, or a solution of Sugar of Lead; Ivy leaves form, for such, a cool pleasant protection from friction, they should be put on fresh every day.

Beneath the corner of the nail of the great toe a peculiar kind of Corn sometimes occurs; it should be cut, or scraped out with the finger nail, and Caustic applied as above directed. Mere callosities of the skin on the hands and fingers are not Corns, although often called so; they have no roots and are not painful, therefore it is best not to interfere with them, for if removed others would come in their places, while the friction is kept up, in which they originate. See *Bunions*, *Chiropody*, *Warts*.

Cornus (Latin for *Dogwood*, which see).

Corona (Latin for a crown). From this root come the medical terms *Corona ciliaris*, the ciliar ligament; *C. glandis*, the permanent margin of the glans penis; *C. veneris*, venerial blotches on the forehead. From hence, too, we have *Coronal* the name of a suture on the head, and *Coronary* applied to the vessels, nerves, &c. which encircle the heart like a crown.

Corone (Greek for a crow). A term applied to the acute process of the lower jaw bone, on account of its supposed resemblance to a crow's bill; and *Coronoid*, a process of the ulna of a somewhat similar shape.

Corpus (Latin for a body; plural, *corpora*). Hence we have *Corpus callosum*, the firm substance which lies between the two hemispheres of the brain, called *Commissura magna; C. cavernosum*, and *C. spongiasum*, those which form the *Penis* (which see); *C. cavernosum Vaginæ*, the erectile spongey tissue of the *Vagina* (which see), this is sometimes termed *Retiformis* (net like); *C. fimbriatum*, a prolongation of one of the angles of the *Fornix* (which see); *C. highmorianum*, a prominence at the superior part of the testes; *C. luteum*, a cicatrix left in the ovarium after the bursting of a vesicle; *C. mucosum* (mucous body), a soft substance, or pigment, situated between the cuticle and the cutis, giving its peculiar colour to the *Skin* (which see); *C. pampiniforme*, a tendril-like plexus of the spermatic vein. In the plural we have *Corpora albicantia*, two white bodies in the cerebellum; *C. fimbriata*, the pleating of the margin of the processes of the *fornix*, sometimes called *Tænia hyppocampi; C. geniculata*, two knotty prominences at the interior surface of the cerebrum; *C. olivaria* and *C. pyramidalia*, two olive-shaped and pyramidical eminences of the *Medulla oblongata; C. quadrigemina*, four eminences, or tubercles, of the brain, which support the pineal gland; *C. restiformia*, two cord-like processes extending from the medulla oblongata to the cerebellum; *C. striata*, two streaky eminences on the lateral ventricle of the *Brain* (which see).

Corpusculum (diminutive of *corpus*, Latin for body). A little body; hence *Corpuscula aurantii*, three small hard tubercles situated on the point of the valves of the aorta; they are also called *Corpora sesamoidea*, because they are about the size of the sesamum seeds.

Corrigens. A constituent part of a medical formula, signifying that which corrects its operation. See *Prescription*.

Corroborants (Latin *corroboro*, to strengthen). Medicines, or whatever gives strength to the body, as Bark, Wine, Beef-tea, &c. See *Nutrients*, *Tonics*.

Corrosive (Latin *corrodo*, to cut away). See *Caustics*, *Escharotics*.

Corrosive Sublimate is the common name of the oxymuriate, or as it is now called, the Bichloride of Mercury, one of the most corrosive of metallic poisons. See *Mercury*.

Corrugator Supercilii (Latin *corrugo*, to wrinkle). A muscle which draws the skin of the brow into wrinkles.

Cortex (Latin for *Bark*, which see). Not only is this term applied to the Cinchona bark, but also to the outer coverings of all trees and plants of woody fibre, many of which possess medicinal properties; thus we have *Cortex Alstiniæ*, the bark of the *Alstinia Scholaris*, of the natural order *Apocyneæ*, an aromatic astringent bitter, which has been found useful in bowel complaints; and *Cortex Brasiliensis*, also astringent, and sometimes used in hœmorrhages and other internal diseases: neither of these are common remedies.

From the above root we have also *Corticine*, an alkaloid found in the bark of the *Populus tremulus* and some other trees; and *Cortical substance* the exterior covering of the brain and kidneys.

Corydalin. An alkaloid found in the root of the *Corydalis tuberosa* and some other plants.

Coryza (Greek *kara* or *karys*, the head, and *zeo* to boil). Applied to a cold in the head, which affects the eyes, nostrils, &c. See *Catarrh*.

Cosmetic (Greek *kosmos*, ornament). An external application to the skin, applied for the purpose of removing spots and freckles and improving the complexion. It may be innoxious such as Elder-flower, Rose or Hungary-Water; but most of the cosmetics employed are of a deleterious nature, and ultimately, if not immediately, prove injurious to the tissues of the skin, and by their absorption affect the general health. The basis of most of them is some preparation of Arsenic, Bismuth, Lead, or Mercury, and all of these act as poisons when introduced into the system in undue quantities. The Pearl Powder, so commonly used for filling up wrinkles and whitening the skin, is usually composed of Magistery of Bismuth, and French Chalk, in about equal proportions. If white paint of any kind is used, let it be the latter alone, ground to an impalpable powder; with this a very small quantity of Carmine should be mixed, or the unnatural white alone, however pearly it may seem desirable to make the skin appear, has a ghastly effect, and where the deeper tints are laid on there is great danger that the face will assume a streaky appearance at the slightest perspiration or exposure to a damp atmosphere; indeed, ladies who paint should avoid all active exertion, they may look pretty by gaslight, but they must not let the sun shine on their artificial faces; neither must they enter at all keenly into the pleasures of the festive scene which they have made themselves up to adorn. There can be no doubt that those who habitually use the paints generally sold for the face, render the skin of the parts to which the application is made, unfit for the purposes for which the delicate tissues were intended. If they employ any metallic preparations, the danger of absorption will be considerably lessened if the pores are first well saturated with some unctuous substance; this, too, will render the skin less likely to shrivel up and peel off, or become covered with blotches; nothing is so good for this purpose as *Cold Cream* (which see).

If Pearl Powder is used as a cosmetic, no onions must be taken by the lady who employs it, nor any preparation thereof brought near her, or her face may, perhaps, change to a dark lead colour; some other substances have also this effect.

Of fluid cosmetics, Rowland's Kalydor and Gowland's Lotion are the most popular; the composition of both appears to be pretty much the same, viz. 1 ounce of Blanched Bitter Almonds, rubbed down with 16 ounces of Rose Water; strain, and add 8 grains of Corrosive Sublimate.

A very pleasant and innocent application for a rough and freckly skin is *Milk of Roses* made as follows:—Bitter Almonds 6 drachms, Sweet Almonds 12 drachms, blanch and beat up in a mortar with 1 drachm of Castile Soap; then add gradually 15 grains of Spermaceti, 30 grains of White Wax, and 1 drachm of Almond Oil, previously melted together. When these ingredients are thoroughly mixed, add 6 drops of Otto of Roses, melted in 6 ounces of Rose Water, and afterwards 14 ounces of Distilled Water. A less expensive and more easily prepared kind may be made thus: put into a 6 ounce bottle, 1 ounce of Oil of Almonds with 10 grains of Prepared Kali (Subcarbonate of Potash), shake well, and add 1 drachm of Essence of Bergamot, 2 drachms of Orange or Elder-flower Water, mix, and fill up with Rose Water. For a simple cooling application, simply Rose or Elder-flower Water, with a few grains of Sugar of Lead, may be used; this will be found serviceable in all irritable and inflamed states of the skin from heat, insect bites, and stings, or other causes.

It has been well said that the best cosmetic is a good temper; this, with cleanliness and obedience to the laws of nature and of health, will make a face more pleasant to look upon than all the artificial aids of paint, pomatum, kalydors, and lotions; better to see a few freckles and personal blemishes, than to mark the result of efforts to hide natural defects, which, after all, can be but partially successful, and which, however well intentioned, impress one with a painful sense of an attempted imposition. The fairer half of creation owe it both to themselves, and those whom they desire to please, to dress and to look as well as they can; but let them not, in advancing age, imitate the roseate bloom and spotless beauty of early womanhood, nor present a false face to the world; the admiration, and love, and esteem, which is worth having, is not worn by a blooming cheek and a pearly skin. We admire a "painted lady" as a picture, and as a butterfly; but in neither one nor other of these, can we obtain that which satisfies our longing for heart-communion, for domestic happiness, for companionship and help in the great struggle of life. Our fair readers may depend upon it that the habitual use of Cosmetics, except those of the most simple and innocent kind, which may be perfectly allowable, is always detrimental to health, and never productive of lasting pleasure, or advantage of any kind, See *Health*, *Skin*.

Costa (Latin *custodio* to guard; plural *costæ*). A term applied to the ribs, because they act as a defence to some of the most important internal organs. See *Ribs*.

Costiveness. The state of being confined in the bowels. See *Constipation*.

Cotyledon Umbilicus (Greek *kotyle*, a cavity, and Latin *umbilicus*, the navel). A plant called the Navel Wort, the expressed Juice and the Extract of which have obtained some reputation for the cure of Epilepsy; dose of the Extract, from ½ a drachm to a drachm twice a-day; of the fresh Juice, from 1 to 2 ounces. This Greek root, *cotyle*, is applied to the socket of the hip-bone; and from it we have also *Cotyloid*, the acetabulum, or cavity for receiving the end of the thigh-bone, resembling an ancient cup, sometimes called the *os innominata;* and *Cotyledons*, glands in some animals, disposed over the *chorion* (which see); the term is also applied to the seed lobes of plants.

Couching. An operation performed on the eye in *Cataract* (which see), being a depression, or removal, of the diseased and opaque lens to another part of the eyeball, and thus carrying it out of the axis of vision. See *Eye*.

Cough. A convulsive effort of the lungs to get relief of phlegm or other matter; it may be a symptom of *Bronchitis*, or *Catarrh*, or *Croup*, or *Influenza*, or *Laryngitis*, or *Phthisis*, or *Pleurisy*. or *Pneumonia*, or *Relaxed Uvula* (all of which see), also *Hooping Cough*.

We can here lay down but a few general principles with regard to the treatment of simple cough without reference to the peculiar disease of which it may be symptomatic; and first let us observe, that it may be either what is properly, as well as medically termed *dry* or *moist*. In the former case, Opium and its preparations, are advisable, in the latter they should not be used; the irritation will be best allayed by Henbane or Hemlock, either the Tincture or Extract, with demulcents, as Barley Water, Linseed-tea, &c., and Liquorice, either the Root boiled, or Extract; it is well also to add from 5 to 10 drops of Ipecacuanha Wine to each dose; inhalation also of the steam from boiling water will generally be found beneficial—and especially if some medicinal herb, such as Horehound or Coltsfoot, be infused in it. In moist coughs, there should not be so much fluid taken, and the use of demulcents must be somewhat restricted. Opiates may be administered, but not too freely, either separately, or in cough mixtures: Paregoric Elixir, in which the Opium is combined with Benzoic Acid and Oil of Aniseed (expectorants), and Camphor (antispasmodic), is perhaps the best form of administration; a teaspoonful in a glass of water, generally allays the irritation, and frequent desire to cough which arises from it. In cases where there is difficulty of expectoration, some such mixture as this should be taken:—Compound Tincture of Camphor, 4 drachms; Ipecacuanha Wine, and Oxymel of Squills, of each 2 drachms; Mucilage of Acacia, 1 ounce; Water, 4 ounces, mix and take a tablespoonful when the cough is troublesome; for old people, 2 drachms of Tincture of Benzoin, commonly called Friar's Balsam, may be added to the above; and if there should be much fever, 2 drachms of Sweet Spirits of Nitre. For all kinds of cough, counter irritants should be applied, such as blisters and warm plasters, rubbing in of stimulant ointments, on the chest and between the shoulders; those parts also should be well protected by flannels next the skin, dressed hair-skin, and other contrivances of the kind. For coughs which are more particularly troublesome by night, it is best to give the Opium, Henbane, or

Hemlock, as the case may be, at bed time, in the shape of a pill; of the Extracts of either of the latter, 5 grains may be given; of the first, 1 or 2 grains of the Gum, or ¼ of a grain of Morphine. A long experience of their efficacy among a large number of dispensary patients enables the author to recommend with confidence the following pills:—take of Compound Squill Pill, 1 drachm; Ipecacuanha Powder and Extract of Hyoscyamus, of each, ½ a drachm; mix and make into 24 pills, take one or two on going to rest.

It is a common saying—"feed a cough and starve a fever"—but very frequently febrile symptoms accompany Coughs, and then a full diet is not advisable, and stimulants must be avoided. Great relief is frequently afforded by the use of the warm foot bath, and warm gruel, with a 10 grain Dover's Powder after the patient is in bed; then plenty of covering to encourage perspiration. Coughs should never be neglected, they are so frequently symptomatic of organic disease; if they do not yield to simple remedies, let medical advice be sought, whether the patient be old or young. See *Colds, &c.*

COUNTENANCE. Tolerably clear indications of a person's state of health may generally be read in the expression of the Countenance; where there is great anxiety depicted on this dial plate of the internal organs, there is likely to be functional or organic disease of the heart, pneumonia, bronchitis, laryngitis, croup, chronic consumption, dropsy of the chest, causing a sense of oppression and impeded respiration. In fevers, and other acute forms of disease which shorten life, there is also this anxious expression, as well as in melancholia, hypochondriasis, and to some extent in low forms of mania.

When the countenance is livid and tinged with blood, there is impeded respiration and circulation, probably congestion of the brain; this is the case in apoplexy, disease of the heart, effusion of the lungs, &c. A pale countenance is a sign of fainting, of anæmia, and hæmorrhage, external or internal. When the expression is violent and excited, there is probably the delirium of fever, inflammation of the brain, mania, or delirium tremens. In paralysis, convulsions, epilepsy, hysteria, and chorea, we have a distorted countenance; and a flushed one is symptomatic of fever in general, and of the early stage of delirium tremens. Sometimes, in the latter stage of an incurable disease, the face becomes what nurses call "struck with death," and to this hopeless corpse-like expression has been applied the term *Facies Hippocratica*, because it has been vividly pictured by Hippocrates himself; here is his picture: "The forehead wrinkled and dry, the eye sunken, the nose pointed and bordered with a dark or violet circle; the temples sunken, hollow, and retired; the ears sticking up, the lips hanging down, the cheeks sunken, the chin wrinkled and hard, the colour of the skin leaden or violet; the hair of the nose and the eyelashes sprinkled with a yellowish white dust." See *Face.*

COUNTER (Latin *contra*, against). From this root we have the terms *Counter-extension* (see *Fracture*); *Counter-irritation*, the effect of a blister, liniment, cautery, &c., applied over any diseased part; *Counter-opening*, a second opening made in an abscess opposite the first· from hence also we have *Contra-fissure*, and *Contra-coup*, with some other phrases used in medicine and surgery.

COUP DE SOLEIL (French for a stroke of the sun). An affection of the brain produced by the sun's rays striking upon the head. This but seldom occurs, except in very hot countries; the first effect is often a sudden fit of insensibility, the patient falls to the ground, and lies there motionless: in this case wet cloths should at once be applied to the head, and if possible, some Brandy and water, or Spirits of Ammonia, in water, should be got down his throat. If there is a full pulse and laboured breathing, application should be had to the lancet, the blood to be taken from the arm, or temporal artery. There may be a complete or only partial recovery from the infliction; sometimes the brain is permanently affected, and lunacy is the consequence; but even when the recovery appears to be perfect, the sufferer should be extremely careful not to expose himself to the like danger. See *Brain, Hurt.*

COUPEROSE (Latin *cuprum*, copper, and *rosa*, a rose). A carbuncled face, so called on account of the redness of the spots. See *Acne, Gutta Rosacea.*

COW POCK. It has been long known that cows are liable to a pustular eruption on their ureters, which is communicable to the hands or arms which come in contact with them in the process of milking; it was found that ulceration, and some degree of fever ensued; and, after a time, it was also noted that those who had this "Cow Pock," as it was called, in nearly all cases escaped the ravages of the *Small Pox* (which see). The result of these observations, was the practice introduced by Dr. Jenner, of inoculating with virus, taken from the pustules of the cow, or some human subject to whom the disease had been communicated, the arms of healthy persons, and so, by giving the slight and far less dangerous disease, protect them against that fearful malady, which, in its periodic visitations, had swept off hundreds of thousands, and permanently disfigured as many more.

The Cow Pock eruption assumes the form of a circular vesicle of a livid appearance, having the edges more elevated than the centre, and distended with a limpid fluid, which soon escapes, when the vesicle dries up, and, after a short time, comes away, leaving a little hollow in the skin neither very deep nor permanent. There is little or no constitutional derangement, and unless there are febrile symptoms, medicines generally are not required. For the mode of communicating this disease, see *Inoculation*, *Vaccination*.

Cowhage or Cowitch. The stiff hairs which cover the pods, or seed vessels of the *Dolichus Pruriens*, a plant of the order *Leguminoseæ*, have been found efficacious in dislodging intestinal worms, particularly the species called *lumbrici*, resembling earth worms; the dose is from 5 to 10 grains, or more, on going to bed, and again the first thing in the morning, in Treacle, Honey, or Syrup; continue this for three or four days, and then administer a brisk cathartic, such as Jalap, with a couple of grains of Calomel. See *Vermifuges*.

Coxa (Latin for the hip, plural *coxæ*); from which also we have *coxendix*, the hip joint. See *Hip*.

Crab's Claws (*Cancri chelæ*). Under this name, and that of Crab's Eyes (*Occuli cancrorum*), or Crab-Stones (*Lapides cancrorum*), a cretaceous preparation was formerly much used as an anti-acid and absorbent; it is still so to some extent, but possesses no qualities which entitle it to a preference over *Prepared Chalk* (which see). It was understood to be the calculous concretions found in the stomach of the Cray fish, or River Lobster (*Cancer asticus*), or the cast shells of the Black-clawed Crab (*Cancer pagurus*).

Crab Yaws. Excrescences on the soles of the feet. See *Frambœsia*.

Cramp (German *krempen*, to contract). An involuntary and painful contraction of the muscles, often causing the most acute pain; the legs and arms are the parts most likely to be affected by it, but especially the former; sometimes it is general, as in cholera affecting the whole muscular system, but most frequently local. Its principal exciting causes are pressure and irritation, arising from the presence of indigestible food in the stomach, or a superabundance of acid in the bowels; pregnant women are much subject to it, and those who have worms; it often accompanies obstructed menstrual discharges, and impeded circulation; when it affects the arms and fingers there is reason to apprehend disease of the heart, or of the large vessels of the chest, and medical advice should be at once sought. Sudden and prolonged cold will often produce general Cramp, depriving the patient of all power of movement; hence it is that bathers, who at one moment are floating buoyantly on the wave full of life and activity, sometimes sink the next, to rise no more until they are brought up by the drag bloated and swollen corpses. If the swimmer is seized by Cramp when in deep water, and far away from help, there is no hope for him; he goes down like a stone, and becomes an easy prey to the whelming waters which surround him.

The best immediate remedy for local Cramp is undoubtedly friction; let the leg, or other part affected, be well rubbed with Soap or Camphor Liniment, mixed with an equal part of Turpentine or Spirit of Hartshorn; sometimes relief may be had by tying a band of some kind tightly round the affected limb between the seat of the pain and the body of the patient; this is a perfectly safe process; not so is the practice of standing upon a cold hearthstone, from which many find relief; this is likely to strike a chill through the whole system, and occasion permanent injury to the health.

For general cramp, which usually assumes the character of *Spasms*, see *treatment* prescribed under that head. In all cases the bowels should be attended to, and freely evacuated by means of warm stimulating aperients such as the following:—Powdered Rhubarb and Magnesia, of each a drachm; Spirits of Sal Volatile and Tincture of Ginger, of each 2 drachms; Peppermint Water, 6 ounces; mix and take a tablespoonful every three hours until the effect is produced. If there is reason to suspect the presence of worms, take first 2 grains of Calomel mixed with Sugar, and put on the tongue; three hours after 2 drachms of Spirits of Turpentine, and 4 drachms of Castor Oil; or, Oil of Male Fern half a drachm; Mucilage of Acacia, half an ounce; mix and add Peppermint Water, 1 ounce; take half, and repeat the dose in two hours. Where there is obstinate constipation, repeated doses of Castor Oil, floating in some carminative water, should be taken, about a tablespoonful every two or three hours, commencing with the Calomel, as above directed.

CRANIUM (Greek *kara*, the head). The skull or cavity in which the brain with its membranes and vessels is lodged, is so called. See *Head*, *Skull*. From the same root come the terms *Craniology*, a description of the skull, and *Cranioscopy*, an examination of the skull.

CRASSAMENTUM (Latin *crassus*, thick). That portion of the blood called the clot, or cruor, consisting of fibrin and red globules. See *Blood*.

CREAM. The yellowish white fluid which collects upon the surface of milk; its composition approaches very nearly to that of animal fat; it is found in the milk of all animals, the quantity varying considerably, as well as the richness, even in the same animal, according to age, state of health, and nature of food. The *Family Doctor* does not recommend Cream to persons of weak, digestion: it is undoubtedly nourishing but apt to disagree; if taken at all, it should be in small quantities; it may sometimes be given with advantage to invalids for whom a milk diet is prescribed, but who cannot take a sufficient quantity; in this case it is best mixed with Arrowroot Mucilage or some farinaceous food. See *Milk*.

CREAM OF TARTAR. A common name for the Bi-tartrate of *Potash* (which see).

CREASOTE, or KREASOTE. Is an oxy-hydro-carburet prepared from Pyroxylic Oil, or Wood Tar: this is an oily-looking fluid of a peculiar odour, which has been used with considerable success in the treatment of various diseases. Applied locally, it is styptic and antiseptic, and may be used with advantage in the form of ointment and lotion as a dressing for foul ulcers, indolent itch, and other skin diseases. Creasote frequently affords immediate relief in toothache; internally, it, sometimes, relieves sea sickness, and allays vomiting, but it must not be given in inflammatory conditions, and structural disease of the stomach: in the vomiting resulting from pregnancy and hysteria it has been found especially useful; the dose is from, to 2 drops, which may be increased to 5, in a wine-glassful of water. The Creasote Mixture of the Pharmacopœia, in which the taste is concealed by Oil of Juniper, is the best form of administration; the dose is from 1 to 2 ounces. We give the form—Creasote and Acetic Acid, of each, 16 minims; Compound Spirit of Juniper and Syrup, of each, 1 ounce; Water, 14 ounces; mix the Creasote with the Acid, then add the Water gradually, and lastly the Syrup and Spirit. As a lotion for inflamed eyelids, and mercurial salivation, a preventive of bed sores, and a variety of other purposes, this substance has been applied successfully.

CREEPING SICKNESS. A name applied in Germany to the gangrenous form of *Ergotism* (which see).

CREMASTOR (Greek *kremao*, to suspend). The name of the muscle which draws up the *Testes* (which see).

CREPITATION (Latin *crepito*, to creak). The grating sensation, or noise, occasioned by pressing the finger upon a part affected by *Emphysema* (which see), or by the ends of a fracture when the bones are moved. (See *Fracture*.) Certain salts, also, during calcination, emit this creaking sound. From the same root, or *crepo*, to crackle, comes also

CREPITUS. The peculiar rattle of *Pneumonia* (which see), and the grating noise made by the joints when there is a deficiency of the lubricating fluid

CRESSES. Various plants, which have acrid or pungent leaves, are so called; they are agreeable, and generally wholesome salads, not well suited, however, for weak stomachs; their good effect in purifying the blood is probably owing to the presence of a small quantity of iodine. The species most commonly eaten are, the Common Cress (*Lepidium Sativum*); the Water

Cress (*Nasturtium Officinale*); the Normandy Cress (*Barbarea Præcox*), and the Indian Cress (*Tropæolum Majus*). See *Salad.*

Creta (Latin for *Chalk* (which see), and *Lime.*

Cretinism. Imperfect developement of the brain, causing mental imbecility; it is usually combined with bronchele, and chiefly prevails in the valleys of Switzerland. See *Goitre.*

Cribriformis (Latin *cribrum*, a sieve, and *forma*, likeness). The plate of the ethmoid bone, so called because it is perforated like a sieve. See *Nose.*

Cricos (Greek for a ring). Hence we have *cricoid*, the name of the ring-like cartilage of the larynx; and *crico*, the bases of several terms applied to the muscles of the *Larynx* (which see).

Crinis (Greek for the hair). See *Capillus.*

Crisis (Greek *krino*, to decide). The decisive period or event of a disease. From the same root comes also *critical*, applied to the symptoms connected with the changes of a disease; by the ancient physcians certain days in the duration of sickness were so designated, and still are, by nurses and old-fashioned practitioners.

Crista Galli (Latin for cock's crest). The cristiform process of the ethmoid bone. See *Nose.*

Crocus. The stigmas of the *Crocus Sativus*, a plant of the natural order *Iridaceæ*, possess antispasmodic, stimulant, and emmenagogue properties; but they alone are not much to be depended upon. See *Saffron.*

Crotchet. A curved instrument with a sharp hook, used for extracting the *Fœtus* (which see).

Croton Oil. Expressed from the seeds of the *Croton Tiglii*, a plant of the natural order *Euphorbiaceæ*, which grows in the East and West Indies. Except Elaterum, it is the most powerful of known drastic purgatives: it acts very speedily, when it does act, but this is somewhat uncertain; one of its most marked effects is to increase the flow of urine. In obstinate cases of constipation, dropsy, and in apoplexy and paralysis, where it is desirable that a speedy irritant action on the intestines should be produced, resort is generally had to this oil; and in lock-jaw and mania it is of great advantage; a few drops placed on the tongue will produce catharsis. Externally it is a strong counter-irritant, producing redness, soon followed by pustular eruptions; thus employed it is very useful in inflammation of the chest. *Crotonic Acid* and the alkaloid *Crotonine*, are also procured from the seeds of the above plant.

Croup. This is an inflammation of the larynx and trachea, causing a difficulty of breathing, and a rough hoarse cough, with a sonorous inspiration of a very peculiar character, sounding as if the air was passing through a metallic tube: it most usually attacks children of from one to three year of age, to whom it sometimes proves fatal; very rarely are adults affected by it. Croup is called by medical men *Cynanche trachealis;* its first *symptoms* are merely those of a common cold or catarrh; then comes on a dry cough with hoarseness and wheezing; at night there is restlessness and rattling in the throat, after which the croupy crow and sound above spoken of give unmistakeable warning of the disease, which goes on increasing in intensity for a day or two, or perhaps several days, before there is a really alarming paroxysm, which mostly occurs about midnight. The child, after tossing restlessly about, endeavouring in vain to sleep, will start up with a flushed face, protruding eyeballs and a distressing look of terror and anxiety; there is a quick vibrating pulse, and agitation of the whole frame which presently becomes covered with a profuse perspiration: as the struggle for breath proceeds there is clutching of the throat as though to force a passage; the arms are thrown wildly about, the respiration becomes more laboured, the rough cough more frequent, and the characteristic Croup rings out like an alarm note. There is expectoration of viscid matter, but so difficult is it to be got rid of, that the effort appears to threaten strangulation; gradually the symptoms become weaker, and eventually the child falls into the sleep of exhaustion. It will probably wake up refreshed, and during the day may appear pretty well; but at night again, probably there will be a recurrence of the attack with aggravated symptoms, convulsions, spasms of the glottis, causing the head to be violently thrown back, in the effort to obtain a passage for the air through the windpipe; there is a fluttering motion in the nostrils, the face is puffed and of a pale leaden hue; a film comes over the sunken eyes, the pulse becomes feeble and irregular; there are more gasping convulsive efforts to continue the struggle, but in vain, the powers of life at length succumb, and the patient sinks into a drowsy stupor, which ends in death. Such is the frequent course of this painful disease, and the changes from bad to worse are so rapid that there is little time for the operation of remedies, that is, when the paroxysms have begun.

Treatment. Confinement to the house in case of threatened Croup is always advisable, unless the weather should be very warm and open, and then exposure after sundown should be avoided; a dose of Calomel, about 3 grains, should be administered, and followed by nauseating doses of Tartarized Antimony, of which 1 grain may be dissolved in an ounce of Warm Water, and a tea spoonful of the solution given every quarter of an hour, until the effect is produced; should the bowels be confined after this, give Senna Mixture, or a Scammony Powder. Mustard and Bran Poultices to the throat, Leeches, if the patient is of a full habit, and the breathing is very laboured; and a spare diet are the other remedial measures.

In the paroxysms, the most prompt and vigorous measures must be adopted to give any chance of success: bleeding in such quantity as to diminish the vascular action on the surface of the wind-pipe, and to relax the muscles; strong emetics to cause full vomiting, which often has a most beneficial effect; warm baths, and blisters applied from one ear to the other. Calomel combined with Ipecacuanha Powder, or Tartar Emetic, should be given every four hours or so, and if the danger is extreme, counter irritation by means of Mustard Poultices applied to the calves of the legs, &c. In leeching for Croup, one leech for each year of the child's age is the general rule to be observed, and the best part is over the breast-bone, where pressure can be applied to stop the bleeding if required; over the leech bites, apply a blister should one appear necessary. If the above powders should cause too violent an action on the bowels, add to them a little Chalk with Opium. Should the child appear likely to sink from exhaustion, after vomiting has been produced, stay the emetics, and give Liquor of Acetate of Ammonia 20 drops, with 5 or 10 drops of Sal Volatile, or the same of Brandy in a little water, or Camphor Mixture; a little White Wine Whey may also be administered. Of course, the first endeavour in an attack of Croup should be to obtain medical assistance; but if this cannot be procured, there must be no temporizing, resort at once to the remedies most ready to the hand, using them according to the best knowledge and discretion available. The best resort in desperate cases is the opening of the windpipe (see *Trachcotomy*) and this only a professional hand can attempt: there is but a faint hope of saving life by this means, and the parent's consent should always be obtained before it is tried. Let the contagious nature of Croup be ever borne in mind, and especial care taken to keep apart those affected with it from any other children in the family or house. Let it also be remembered that the great agents in producing it are cold and moisture, and, the greatest of all, the east wind, and that those who have once been attacked by it are peculiarly liable to a recurrence of such attack.

Croup is most likely to be fatal when inflammation commences in the fauces, and this if discovered in time may be stopped by the application of a Solution of Nitrate of Silver to the whole surface within sight, and to the *Larynx* (which see).

Spasmodic Croup, or Child Crowing, as it is often called, exhibits much the same symptoms as the Croup; it is not, however, of an inflammatory character, but is symptomatic of some other disease commonly coming on as a result of irritation caused by hydrocephalus, teething, worms, &c.; the medical man only can judge of the probable cause, and he will use such remedies as are most applicable to the peculiarity of each case. The following mode of treatment recommended by Dr. Leman, of Torzan, has, we believe been found efficacious in many cases of Croup, it is simple and easy of application. We give the details as furnished by Dr. Graves:—"A sponge, about the size of a large fist, dipped in water as hot as the hand can bear, must be gently squeezed half-dry, and instantly applied under the little sufferer's chin over the larynx and windpipe: when the sponge has been thus held for a few minutes in contact with the skin, its temperature begins to sink; a second sponge, heated in the same way, should be used alternately with the first. A perseverance in this plan during ten or twenty minutes, produces a vivid redness over the whole front of the throat, just as if a strong sinapism had been applied; this redness must not be attended or followed by vesication. In the meantime, the whole system feels the influence of the topical treatment; a warm perspiration breaks out, which should be well encouraged by warm drinks, as Whey, weak Tea, &c., and a notable diminution takes place in the frequency and time of the cough, while the hoarseness almost disappears, and the rough ringing sound of voice subsides, along with the difficulty of breathing and restlessness; in short, all danger is over, and the little patient again falls asleep, and awakes in the morning without any appearance of having recently suffered from so dangerous an attack. I have repeatedly treated the disease on this plan, and with the most uniform success. It is, however, only applicable to the very onset of the disease; but it has the advantage of being simple, efficient, and easily put in practice, and its effects are not productive of the least injury to the constitution."

CRUCIAL (Latin *crux*, a cross). A term in surgery applied to incisions made across each other, and to the crossing ligaments of the knee, &c.

CRUDITIES (Latin *crudus*, raw). Applied to undigested substances in the stomach. See *Digestion*.

CRUOR. The clot of the blood. See *Crassamentum*.

CRURA (plural of *crus*, a leg). A term applied to some parts of the body because they resemble a leg, or root, such as the *C. Cerebri* and *C. Cerebelli*, parts of the brain. Derived from this root are the terms *Cruræus* and *Cruralis*, applied to the nerves, &c., of the leg, and the latter also to femoral *Hernia* (which see).

CRUSTA (Latin for a shell, or scab). Hence we have *Crusta lactea*, milk scall. See *Porrigo*.

CRYOLITE. A preparation of Alumina and Soda, being a double Hydro-fluate of those combined substances; it is seldom or ever employed medicinally.

CRYOPHORUS (Greek *kryos*, cold, and *phoro*, to bring). An instrument for exhibiting the degree of cold produced by *Evaporation* (which see).

CRYPTÆ (Greek *krypto*, to hide). Mucous follicles, which are concealed from view).

CRYSTALLI (Greek *krystallos*, ice). A term formerly applied to *Varicella* (which see) on account of the white shining appearance of the little pustules containing lymph. From the same root come also *Crystalline*, applied to the lens of the eye; and *Crystallization*, the process by which liquid or gaseous bodies form themselves in *crystals*, the investigation of the forms and nature of which constitutes the science of *Crystallography*.

CUBIDIS (Greek *kubos*, or cube, and *eidos*, likeness). The name of a cube-shaped bone in the *Foot* (which see).

CUBITIS (Latin *cubo*, to lie down,) applied to the forearm, consisting of the *ulnar* and *radius*, because it was the part on which the ancients rested when they reclined at their meals. See *Arm*.

CUBEBS. Berries of the *Piper Cubebæ*, or Java Pepper, belonging to the natural order *Piperaceæ*, are carminative, stimulant, and diuretic, being, however, inferior in pungency and aromatic warmth to the common Pepper, they fell into disuse; but lately, they have again obtained a prominent place in the materia medica, chiefly as a remedy for gonorrhœa, on which complaint they are said to exert a specific influence, if taken in the early stages. The dose is a dessert spoonful of the powdered Berries three times a-day, in water or some other convenient liquid; the essential Oil is sometimes given, but has not so good an effect.

The dried fruit of the *Rhamnus Catharticus* (see *Buckthorn*), sometimes called Turkey Yellow Berries, are occasionally substituted for the above, being much like them in appearance; their action, however, is very different, being chiefly cathartic, and therefore in many cases mischievous.

CUCULLARIS (Latin *cucullus*, a hood). A broad hood-like muscle of the *Scapula* (which see).

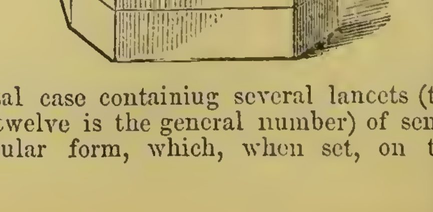
CUCURBITULA (Latin *cucurbitio*, a gourd), applied to a cupping-glass. See *Cupping*.

CUMIN SEED. The produce of the *Cuminum Cyminum*, natural order, *Umbelliferæ;* medical properties, carminative and stomachic; seldom used, however, except as an ingredient in stimulating plaisters: when taken, the dose is from 10 to 30 grains; the seeds yield an essential oil. It appears that the ancients entertained a notion, that drinking, or washing with an infusion of Cumin, or smoking it, produced paleness of the visage; Dioscorides alludes to the belief, and Pliny informs us that the disciples of Portius Latro, a celebrated teacher of oratory, were reported to have used Cumin that they might look as pale as their studious master; Horace also, in his 19th Epistle, lib. 1, lin. 18, alludes to the belief.

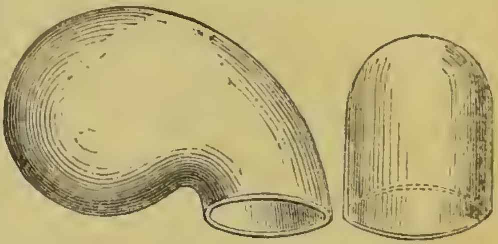
CUNEIFORM (Latin *cuneus* a wedge, and *forma*, likeness). Applied to the wedge-like bones of the foot, termed the inner, middle, and outer *cuneiforms*. See *Foot*.

CUCUMIS (Latin for a cucumber). A genus of plants of the order *Cucurbitaceæ*. Among them we find the squirting cucumber *C. Agrestri* (See *Elaterum*), and the Colocynth gourd, or bitter cucumber *C. Colocynthus*. See *Colocynth*.

CUPPING. The abstraction of blood by means of the cupping-glass, in which a partial vacuum has been produced by the application of heat within, causing the air to expand; this, as it cools, condenses again, and so draws up the skin of the part to which the glass is applied, and causes the blood to flow through the openings made by the concealed lancets of the instrument here represented, called a *scarificator*, which is a metal case containing several lancets (ten or twelve is the general number) of semi-circular form, which, when set, on the



pressure of a spring (1) revolve rapidly on an axis, and protruding through slits in the bottom of the case, make so many clean cuts with very little pain to the person operated on; the depth of these cuts can be regulated by a screw (2), according as the judgment of the operator directs; the setting of the instrument is effected by means of a trigger (3). Cupping, although it requires a quick and practised hand to do it expertly, and with perfect success, is frequently performed as a purely domestic operation, nor can there be any objection to this, provided that the desirability of extracting blood from any particular part of the frame is first clearly ascertained. The mode of operation is this:—Let the part to be operated upon, most frequently the neck, the back, or the loins, be bared, and the patient placed in a convenient position—one which can be maintained for a considerable space of time. First apply to the part a sponge, or a flannel dipped in hot water, to excite a quicker circulation; then take a cupping-glass—one of several previously placed at hand—into which has been put a small piece of paper saturated with Spirits of Wine; place one edge of the glass on the skin of the patient, ignite the spirit by the introduction of a match or screw of paper, and immediately press the glass closely down; it will adhere by the power of suction until the air is admitted by the insertion of a finger-nail beneath the edge. Fix two or three glasses in this way; then remove them; and, to the centre of each swelling of the skin which they raise, apply the scarificator, pressing it closely down each time, and causing the lancets to make incisions by the means already described; do this rapidly, and again affix the glasses, charged with spirit; if this is properly done the blood will flow rapidly into them; and when half-filled, or more, they should be removed, the cuts sponged with warm water, to clear them from coagulated blood, and fresh glasses applied, continuing in this way until the necessary quantity of blood is abstracted; this may be from 6 to 12 ounces, according to circumstances, but 8 or 10 ounces is the usual quantity. If the blood does not flow freely, or, as is sometimes the case, ceases after a short time to flow at all, a removal of the glasses, and warm sponging, must be tried; if this is not effectual, cross cuttings with the scarificator should be made, or fresh incisions on a part more favourable for the operation; this should not be where there is much fat or muscle, nor where the surface is very uneven or covered with hairs, as in neither case can the glass fix sufficiently close to exclude the air. None but a very dexterous cupper should operate on a part where the skin is at all thin, as on the temple, where nice judgment and delicate manipulation is required; but to proceed with our directions:—Having taken the requisite quantity of blood, and removed the glasses, which may be done without spilling any of the fluid, if, simultaneously with the lifting the upper edge of the glass, a sponge or flannel is passed rapidly over the surface, so as to sweep the blood into the vessel, cleanse the incisions, and then apply over them strips of Soap or Adhesive plaster; the bleeding ceases immediately, and the cuts generally heal in a few days without pain or annoyance of any kind. Cupping glasses are of various shapes and sizes: we have figured two, the smaller being the favourite with modern practitioners, although the other, which is called the leech cupping-glass, is perhaps the best for an unpractised hand, as it is most easily removed without spilling the blood, and is not so likely, by coagulation over the cuts, to stop the flow, and to necessitate a frequent removal. Spirit lamps and torches, and other contrivances for rarifying the air in the glasses are used, but the simple plan above described is the easiest and the best. A glass, to the top of which an air-pump is affixed, has recently been introduced, and this is the best of all methods: but the instrument is expensive, and therefore scarcely available for household practice.



The process of extracting blood by cupping was practised by the ancients, and some barbarous nations still perform it in a very primitive way. Incisions are made by means of a sharp flint or knife, and over these is applied a cow's horn with the top removed, to the aperture of which the operator applies his mouth, and literally sucks the blood of his patient. The operation as now performed is safer for the unqualified practitioner than either leeching or bleeding; and it frequently affords very speedy relief in inflammatory and some other diseases. See *Depletion*, *Inflammation*, &c.

CUPRUM (Latin for *Copper* which see).

Curcuma (Latin for *Turmeric* which see).

Curd. The coagulum which separates from milk upon the addition of acid, rennet, or wine. See *Cheese*.

Currants. The produce of two species of *Ribes*, much and deservedly esteemed for their grateful acidulous flavour, and wholesome qualities. During the hottest part of the English year, when they are in the greatest perfection, they serve to quench tho thirst, and lessen the tendency to bilious attacks, which are most likely to occur at this season; they are slightly laxative, owing, probably to the mechanical action of the seeds on the bowels. From cultivated varieties of *C. Rubrum* we obtain both red and white currants; the *C. Nigrum* yields the black currants, which have a more astringent taste than the other kinds, and are somewhat aromatic; preserved as jam, they are very useful in colds, coughs, and fevers; an infusion is sometimes made of the leaves, which have diuretic properties.

Grocer's currants are misnamed, being a kind of grape, cultivated chiefly in the Levant. This fruit is sometimes used as a diuretic aperient, chiefly after childbirth, and, in combination with gruel; its action is no doubt mechanical.

Curry Powder. This favourite condiment with those who luxuriate in rich and savory viands, and require constant stimulus for the digestive organs, is usually composed of Cayenne and Black Peppers, Mustard, Ginger, and other spices, with Turmeric for colouring matter. To give pungency and flavour, and the necessary stimulating power to the rice and other vegetable food of hot climates, it is very well; but is seldom required as an addition to animal diet: when taken at all in this country it should be very sparingly, and where there is a tendency to irritability of the stomach and bowels, to excess of bile, or any affection of the head, it is better avoided altogether.

Cusparia. See *Angustura*.

Cuspidati (Latin *cuspis*, a point). The canine or eye *Teeth* (which see.)

Cut. A gash or incision made by an edged instrument. See *Wound*.

Cut Throat. In an emergency of this kind, few unprofessional persons would have the presence of mind to adopt the proper remedial means, even if they possessed the requisite knowledge, and the skill to apply it. The danger to be apprehended is death from hæmorrhage; or, if the wound is sufficiently deep to open the windpipe, from suffocation, from an influx of blood into the passage; in the latter case, any pressure upon the part would but hasten the crisis; but, if the windpipe is not deeply wounded, this may be applied. Should there be a gushing out of dark blood, showing that a superficial vein is wounded, place the fingers on the course of the vein, a little above the cut, between it and the head, and keep a firm, though gentle, even pressure there. If there is bright red blood coming forth in jets, an attempt should be made to tie the divided arteries, for it would be impossible to apply a sufficient amount of pressure to stop the bleeding. For directions, (see *Arteries*.) It is possible that the windpipe may be severed without bleeding to such an amount as to cause death. In this case, place the patient on his face or on one side, with the neck bent forward, so that the blood will naturally take an outward direction; when it has stopped, do not at once close the wound, but put a piece of cambric lightly over it, and, at the end of three or four hours, stitch it up. See *Wound*.

Cuticle, diminutive of Cutis (Latin for *skin*, which see): from the same root comes *Cutaneous*, belonging to the skin; and *C. musculus*, a name for the muscular expansion which extends over the face. See *Platysma Myoides*.

Cuvette (French). An instrument shaped like a spoon, used for the extraction of the cataract. See *Eye*.

Cyanogen (Greek *kyanos*, blue; and *gennao*, to generate). A name given to Bicarburet of Nitrogen, an essential ingredient in Prussian Blue: it is a gas which, in combination with oxygen, forms Cyanic, Cyanous, and Fulminic acids; and with nitrogen, *Hydrocyanic*, or *Prussic Acid*, (which see); also *Cyanides* and *Cyanurets*, as all the compounds of this gas are called which are not acids.

Cyanosis (from the same root), sometimes called *Morbus Cæruleus*, a blue disease. This is the Blue Jaundice of the ancients; those affected by it have their complexion tinged with venous blood, owing to some malformation of the *Heart* (which see.

Cyathus (Greek *kyasthos*, a drinking-cup,) now applied to a wineglass; when ordered in prescriptions, about 3 tablespoonsful, or an ounce and a half, is meant.

Cyder. The fermented juice of apples, much used in some parts of England as a common drink; it is more wholesome than beer, containing but little alcohol, not above nine per cent. Malic acid is its characteristic principle. The dry bellyache resembling painters' colic, which prevails at times in Cyder districts, is thought to proceed from an impregnation of lead; that metal which readily combines with the above-named acid, being sometimes employed in the manufacture of cyder-vats. See *Diet*.

Cydonium, from *Cydonia*, a town in Crete, celebrated for the growth of Quince-trees. See *Quince*.

Cynanche (Greek *kyon*, a dog; and *aycho*, to strangle). A term applied to various affections of the *Throat* (which see). Thus we have *C. maligna*, ulcerated or sloughing Quinsy; *C. tonsillaris prunella*, simple Quinsy; *C. parotidæa*, Mumps; *C. pharyngea;* and *C. laryngea*, or *Trachealis*, Croup (all of which see.)

Cynaria. The scientific name of the Artichoke, the leaves of the common species of which yield a bitter juice, which is diuretic, and was formerly given in dropsical complaints. In the form of Extract, it has been found to give speedy relief in some cases of rheumatism, or gout, and sciatica, the dose being from 2 or 3 grains—some say 5—three times a day. Its administration should be preceded by a purgative, and such a dose of the Extract should be given as will move the bowels. There is a Tincture of Cynaria but it is scarcely active enough of itself. It may be given in conjunction with the Extract.

Cyonolyssa (Greek *kyon*, a dog; and *lyssa*, madness). Canine madness. (See *Hydrophobia*.) From the same root comes also *Cynorexia*, canine appetite; and *Cynosbatus*, a name for the canine or dog rose.

Cyprus Powder. A French cosmetic, prepared from the acrid *Arum* (which see).

Cystus (Greek *kystos*, a bladder) whence we have the medical terms *Cystic Duct*, the passage leading from the gall bladder; *Cystic Oxide*, a species of calculus found in the bladder; *Cystorrhagia*, hæmorrhage from the urinary bladder; *Cystorrhea*, catarrh of the bladder; *Cystitis*, inflammation of the bladder; *Cystitome*, an instrument for opening the crystalline lens; *Cystocele*, a kind of hernia formed by protrusion of the bladder; *Cystotomia*, the operation of opening the bladder for the extracion of a calculus. See *Lithotomy*, &c.

Cytisine. An alkali, discovered in the seeds of the *Cytisus Laburnum*, or Pea-tree of our shrubberies, and also in the Asarabacca and Arnica, or Leopards-bane; it is bitter, and possesses emetic properties, but has not hitherto been employed medicinally to any useful extent.

Dacryoma (Greek *dakryo*, to weep). A state or condition of the eye in which one or both of the external openings of the lachrymal ducts are closed. See *Eye*.

Daffy's Elixir. This is still a favourite quack medicine, although not so much used now as formerly; it is very similar to the Compound Tincture of Senna; but different makers vary the preparation considerably. The following is the recipe given for Dicey's "Daffy," which has, perhaps, been more extensively used than any other:—Senna leaves, 5 ounces; Guaiacum shavings, dried Elecampane Root, Aniseeds, Corianders, Caraways, and Liquorice Root, and, according to some, red Sanders Wood, of each 2½ ounces; stoned Raisins, 8 ounces; Proof Spirit, 6 lbs.: macerate for a fortnight and filter. This is an excellent family aperient, acting generally with tolerable quickness and certainty; the quantity of spirit which it contains renders it objectionable for children; and it should not be given in cases where there is a tendency to inflammation. The dose for an adult is from 2 to 3 tablespoonsful. See *Senna*.

DALBY'S CARMINATIVE. Dr. Paris gives, as a formula for the preparation of this celebrated quack medicine, the following:—Carbonate of Magnesia, 2 scruples; Oil of Peppermint, 1 drop; of Nutmeg, 2 drops; of Aniseed, 3 drops; Tincture of Castor, 30 drops; of Assafœtida, 15; of Opium, 5; of Cardamums (compound), 30 drops; Spirit of Pennyroyal, 15 drops; Peppermint Water, 2 ounces. The great objection to the use of this otherwise excellent Carminative is the Opium which it contains; for this is a drug which should never be given to the young, unless under medical sanction and supervision. The above formula contains, we see, 5 drops to 2 ounces; but every druggist makes his own "Dalby" according to his own particular form; and in many of the formula there is no doubt a much larger proportion of the objectionable drug; indeed, the stronger he makes it in this respect the greater satisfaction will be given to his customers, whose object is to "still" their fretful infants. Leave out the Laudanum, and no better Carminative could be administered than the above; leave it in, and we must denounce "Dalby's" as a dangerous nostrum, whose frequent and habitual use, although it saves mothers present trouble, entails upon them future sorrow and anxiety, by making their children grow up puny and sickly, if it does not produce mental imbecility.

DAMSON, or DAMASCENE. A kind of plum, very hardy and prolific, therefore cultivated extensively in this country; this well-known fruit is slightly aperient, and, when ripe, is very wholesome; it should not be eaten by invalids unless boiled or otherwise cooked. See *Fruit*.

DANDELION (French *Dent-de-Lion*, or Lion's tooth). A common plant of the fields in this country, belonging to the natural order *Compositæ*, whose botanical name is *Taraxacum dens Leonis;* it possesses tonic, alterative, diaphoretic, and diuretic properties, and has long enjoyed the reputation of being beneficial in obstructions of the liver, and in visceral diseases: its action appears to be somewhat like that of Sarsaparilla, and it is often given in dyspepsia, dropsy, skin disease, and cachectic disorders generally. Being easily procured, and of well established repute, it is one of the plants most frequently used by country people for the cure of their ailments: a decoction is made of the fresh root sliced, about an ounce of which is put into a pint of water, this is boiled down to half a-pint, and strained; add to this quantity 2 drachms of Cream of Tartar, and take a wineglassful twice or thrice a-day. Surgeons most commonly order the Extract, which is prepared by first obtaining the juice from the fresh root by pressure, and then evaporating until it is somewhat thicker than treacle; the dose of this is from 10 grains to ½ a-drachm; it is frequently given in combination with stronger diuretics in disease of the urinary organs. The following is a good form of combination for chronic affection of the liver:—Extract of Taraxacum, 4 drachms; Carbonate of Soda, 1 drachm; Spirit of Sulphuric Ether, 2 drachms; Syrup of Orange Peel, ½ an ounce; Infusion of Gentian sufficient to make up 8 ounces; two tablespoonfuls to be taken twice a-day, with a 2½ grain Blue Pill, or a 5 grain Plummer's Pills every night for the first week, then every other night.

In some parts of Germany, the poorer people roast the Dandelion roots, and take the decoction of these for coffee. The leaves, also, are very commonly used on the Continent as a salad; they are no doubt very wholesome thus taken, and, to some constitutions, beneficial; by these leaves the plant may be easily distinguished, when not in flower, from their deeply indented shape, from whence they obtain the name "Lion's Tooth." See *Taraxacum*.

DAPHNE. The name of a genus of plants, to which belong the Flax-leaved Daphne, or Garou Bush (*D. Gnidium*), the seeds and bark of which are acrid and poisonous, although the former are occasionally used by the French as purgatives; and the Spurge Laurel (*D. Laureola*), the berries of which are sometimes used in the form of a tincture to make blisters, and of an ointment to keep them open.

DAPHNE MEZEREON. The Spurge Olive, which yields the Mezereon Bark used medicinally; its active principle is called Daphnin, it is procured by macerating the bark in alcohol. See *Mezereon*.

DARTOS (Greek *dero*, to excoriate). The rough or corrugated part of the *Scrotum* (which see).

DARTRE (Greek *dartos*, a crust or shell).

This is a term which has been used at different times to designate nearly all *Skin diseases* (which see), also *Tetter*, to which it more properly belongs.

Date. The fruit of the Date Palm, which constitutes a considerable portion of the food of Egypt, Northern Africa, Arabia, and Persia; it contains a large quantity of sugar, in which its nutritive property consists. The dried dates which we have in this country are too indigestible to be quite wholesome.

Datura Stramonium. The Thorn Apple (see *Stramonium*); its narcotic principle is called *Daturine*.

Daymare (*Ephialtes Vigilantium*). A kind of incubus, the result of indigestion, occurring during the day, and attended with that severe pressure on the chest which is a characteristic of *Night-mare* (which see).

Day Sight. An affection of the vision, sometimes called *Nyctalopia*, or Night-blindness, because the sight is dull and confused at night, but clear and strong in the daylight. Another name for it is Hen-blindness, because the sight of hens is known frequently to be so affected. See *Sight*.

Deafness may proceed from any injury inflicted on the delicate organs of the ear by loud noises, violent colds, inflammation or ulceration of the membrane of the auditory passages; hard wax, or other substances interrupting the transmission of sounds; either over dryness, or excessive moisture in the parts; want of tone in the general system from debility: among one of its frequent causes, is some defect in the structure of the organ itself, which no medical treatment can obviate; in this case there is generally dumbness as well.

The *treatment* will depend to a considerable extent on the cause; if there is an accumulation of hardened wax, or any defective or diseased action in the secreting glands of that substance, a few drops of a saturated solution of Common Salt, or of Ox Gall and Balsam of Tolu, one part of the former to three of the latter, may be dropped into the ear, while the head is held on one side, night and morning; or applied on a piece of wadding inserted by means of a probe; before each application, the ear should be syringed out with warm milk and water, or soap and water. If there is a thin acrid discharge accompanying the deafness, apply a blister behind the ear and keep it open for some time with Savine Ointment. When deafness proceeds from cold in the head, diaphoretics, the warm foot bath, and flannel wrappers must be the remedies; if from debility and consequent loss of tone, drop stimulants into the ear, electrify or galvanize, and give tonics; this will be the treatment also, if it proceeds from defective energy of the optic nerve. See *Ear*, *Hearing*.

Debility (Latin *debilis*, weak). See *Weakness*.

Decidua (Latin *decido*, to fall off). A membrane thrown off from the uterus after parturition. (See *Caduca*.) From the same root comes the term *Decidua reflexa*, a floculent layer forming parts of the aperture of the *Ovum* (which see).

Decoction (Latin *decoquo*, to boil away). This term may apply to the operation of boiling, or to the fluid when boiled, and containing, in solution, the active principles of the drugs, generally vegetables, subjected to the process. The following are the decoctions contained in the London, Edinburgh, and Dublin Pharmacopœias:—Decoctum Altheæ (of Marsh Mallows), demulcent and emollient; dose 1 ounce to 2 ounces. *D. Aloes Comp.*, gently cathartic and emmenagogue; ½ an ounce to an ounce. *D. Anthemidis* (Camomile), tonic and stomachic; a wineglassful. *D. Cetrariæ* (Iceland Moss), tonic and demulcent; ½ an ounce to 2 ounces. *D. Chimaphilæ* (Winter Green), diuretic; 1 ounce to 1½ ounce. *D. Cinchonæ* (Bark), tonic and febrifuge; 1 ounce to 4 ounces. *D. Cydoniæ* (Quince Seed), demulcent; a wineglassful. *D. Daphnes Mezerei* (Mezereon), stimulant, diaphoretic, and alterative; ½ an ounce to an ounce. *D. Dulcamaræ* (Woody Nightshade), diuretic and diaphoretic; ½ an ounce to an ounce. *D. Gallæ* (Galls), astringent; two tablespoonfuls. *D. Geoffræ Inferæmis* (Cabbage Tree Bark), anthelmintic, purgative, and narcotic; 2 drachms for children, adults ½ an ounce to 2 ounces. *D. Granati* (Pomegranate Rind or Root), astringent, anthelmintic. *D. Glycyrrhizæ* (Liquorice), demulcent; a wineglassful. *D. Guaici* (Guaiacum), stimulant, and diaphoretic; 3 or 4 ounces. *D Hæmatoxyli* (Logwood), tonic and astringent; 1 to 2 ounces. *D. Hordii* (Barley), nutritive, demulcent, slightly laxative, any quantity. *D. Myrrhæ* (Myrrh), expectorant, astringent; 1 to 2 ounces. *D. Papaveris* (Poppy), anodyne, emollient; ½ an ounce to an ounce. *D. Pareiræ* (Pareira Root), diuretic and astringent; 1 to 3 ounces. *D. Pyrolæ* (Winter Green), diuretic and tonic; 1 to 2 ounces. *D. Quercus* (Oak Bark) astringent, chiefly used as a gargle or injection. *D. Sarzæ* (Sarsaparilla), simple and compound. *D. Scoparii* (Broom-tops), simple and compound, diuretic; a wineglassful. *D. Senegæ* (Senega Root), diuretic, purgative, stimulant; one or two wineglassfuls. *D. Taraxaci* (Dandelion-root); a wineglassful. *D. Tormentillæ*, astringent; 1 to 2 ounces, mostly used as an injection. *D. Ulmi* (Elm Bark), diuretic and alterative; 4 to 8 ounces. *D. Veratri* (White Hellebore), stimulant and cathartic, for external application. *D. Uvæ Ursi* (Whortleberry), astringent and diuretic. All these should be used fresh, especially in warm weather; direction for quantities of ingredients will be found under the several heads of the chief ingredients in each. Chemically speaking, a decoction is a continual boiling of certain bodies in water, in order to separate from them, or dissolve in the fluid, such parts as are only soluble at that degree of heat.

Decollation (Latin *de*, from, *collum*, the neck) same as *Decapitation*, or removal of the head.

Decomposition (Latin). The separation of the component parts or principles of bodies from each other. See *Analysis*.

Decortication (Latin *de*, and *cortex* the bark). The removal of the bark or husk; sometimes applied to removal of the skin.

Decrepitation (Latin *de*, and *crepitus* a crackling). The crackling noise which is emitted when certain bodies, as common salts, are heated. See *Crepitation*.

Decussation (Latin *decusso*, to cross like an X). A term applied to parts which cross each other, as the optic nerves.

Decussorium (Latin *decusso*, to divide). An instrument for depressing the dura mater after *Trepanning* (which see).

Defluxion (Latin *defluo*, to flow off), applied to an unusual flow of the secretions, as in *Catarrh* (which see).

Deglutition (Latin *deglutio*, to swallow). The act of swallowing. See *Throat*.

Dejectio (Latin *dejicio*, to cast down); hence *D. alvina*, the discharge of the *Fæces*, (which see).

Deliquescence (Latin *deliquesco*, to melt). The property of some salts of attracting moisture from the air, and becoming liquid. Familiar examples of this may be given in *Pearlash*, and *Salts of Tartar*, (which see).

Deliquiam (Latin *deliquo*, to leave), hence *D. animi*, leaving of the senses; *Fainting Syncope* (which see).

Delirium (Latin *deliro*, to rage). A disorder of the brain or intellect—an alienation of the mind connected with fever, which being thus immediately depending on disease, is distinguished from *Mania* or *Madness* (which see). By the presence of the fever in one case, and its absence in the other, Delirium may generally be distinguished from mania, but not always, because febrile symptoms sometimes occur in settled insanity; one great distinctive mark of Delirium is the absence of correct mental perceptions, of connected ideas; the motions and actions appear to be quite involuntary; there is no cunning in delirium—no hiding the thoughts, nor carrying out of a concealed project, as is often the case in madness; there is a perfect wandering of the intellect; the patient is beset with phantoms, and talks incoherently to creatures of his own imagination, and proclaims to the world his most secret deeds and cherished designs; all the senses are affected—seeing, hearing, tasting, smelling, touching, are no longer safe guides, but have abrogated their proper functions and duties. The insane person will follow out an argument, although based upon the most absurd premises. The person affected by Delirium cannot do this, but talks incoherently and quite at random. The maniac plots and contrives; not so the delirious patient: all comes out, frequently with a full consciousness of the folly or mischief of its utterance. As symptomatic of disease, Delirium may be referred to most severe forms of internal inflammation, but more especially to that of the brain. In all continued fevers it is likely to be present; in typhus it is nearly always so; in yellow fever always, and generally in the remittent fever of infants; we see it sometimes in periodic fevers, and also in hectic fever towards the close, when the brain is overcharged with impure blood. With cow-pock there is scarcely ever Delirium, rarely with Chicken-pock, nor in the mildest attacks of small-pox and biliary fever; it is commonly present in the inflammatory fever which accompanies erysipelas; in scarlet fever towards the third day of the eruption; and in the progress of rheumatic fevers. There are two forms of Delirium, distinguished as the *high* and the *low*. In the first, there is a quick strong pulse, a flushed face, a blood-shot eye, great restlessness, and much violence of conduct. Cupping, bleeding, or leeching, with strong purgatives, and firm, but gentle restraint, must be resorted to in this case. In the other, although the mental disturbance is equally great, there is generally a more quiet demeanour, with perhaps occasional fits of excitement only—less heat in the head, flush in the cheeks, throbbing of the veins, and nervous irritability; the pulse is feeble, the hands tremulous—sometimes affected with convulsive starting. In this case blood must not be taken away; the bowels should be kept open, but with gentle aperients; the head should be shaved and kept cool, and the warmth of the feet attended to: Morphia, in quarter-grain doses, may be given, especially if there is great restlessness and convulsive motions; or Battley's Sedative Solution, beginning with 15 drops, and following that up with 5-drop doses, every two hours, until sleep is procured. Should great exhaustion follow, soups and wine may be administered.

Sympathetic Delirium may take either of these forms, but the low type is the most usual. We have this commonly after an accident or severe operation, or protracted childbirth; and in these cases opiates, stimulants, and tonics, with nourishing diet, are generally required. (See *Fevers*).

Delirium Tremens is generally the result of excessive and continued indulgence in intoxicating drinks; it consists of an exhausted condition of the nervous system, and is accompanied with more or less of mental disorder. The taking of opium for a considerable period will also sometimes produce this state of nervous exhaustion, which is called Brain Fever, and is described in some medical works under the several names of *Delirium ebriositatis*, *Erethismus ebriosorum*, and *Encephalopathie crapuleuse;* the French term it *Delirium et mania è potu.* There is a similar disease, called *D. Tramulicum*, which sometimes occurs after serious accidents and operations. (See above, *Sympathetic*). The symptoms of Delirium Tremens are great restlessness and irritation by day, and by night, want of sleep, or uneasy slumbers, haunted by frightful dreams, causing the patient often to scream out in terror; the mind is haunted by suspicions of those around, and although generally more collected than in other forms of Delirium, appears at times to be possessed of demons, which torment the patient with wild visions of seas of flame advancing to overwhelm him, and belts and rings of fire encircling him, and threatening destruction; legions of mocking spirits, too, come around him; he is tormented with unquenchable thirst, and the stings of a guilty conscience goad the poor inebriate almost to madness; he shrieks and raves, prays and curses all in the one breath; and when he sinks exhausted, finds no solace in sleep, which refuses to visit his hot and aching eyes, and agonized and trembling frame. As the disease advances, the mind becomes more and more disordered, the temporary Delirium probably passes into actual insanity; then ensue convulsions, probably epilepsy or apoplexy, leading to a death-like stupor, which is but the prelude to death itself.

What can be done in such a case? The *treatment* must, of course, be of a soothing character: Opium, in full doses, either in the form of Morphine or Battley's Solution, should be administered; if, as is sometimes the case, the stomach is too irritable to retain liquid medicine, give the Gum Opium, in a pill, a grain and a-half as a first dose, to be followed by half-grain doses every hour or so; a drop of Creosote on a lump of sugar, may also be given, to stay the sickness, or an effervescing draught with a drop of Hydrocyanic acid in it. As the liver is generally more or less affected in this disease, a little Calomel should be got down, about three grains placed on the tongue, if pills cannot be taken; if they can, make six with the above quantity of Calomel and half a drachm of compound Colocynth pill, take two first, and one every two hours after, until they operate. Some recommend combining the Opium with these, if this is done it is best to add a grain and a half of Morphine to the above formula.

If these efforts are successful and the nervous excitement is subdued, there will be great prostration of strength; the great object will then be to restore the tone of the stomach, and to enable the patient to overcome that craving for alcoholic stimulants, which is sure to send him back into the paths of intemperance if it is indulged; a Bitter Infusion of Camomile is perhaps the best, but Carbonate of Soda, or Potash, in six or eight grain doses should be given with a small portion of alcohol, it may be Brandy mixed with yolk of an egg, beaten up raw, or with arrowroot, some bitter ale, and good nourishing food. For the rest, see *Drunkenness*, *Intemperance.*

Delphinum. The generic name of two plants belonging to the order *Ranunculaceæ*, sometimes employed medicinally, 1, *D. Staphisagria* (Stavesacre), the seeds of which are emetic, cathartic, and vermifuge; in over doses, poisonous: they have been given internally in lepra and other skin diseases, but are chiefly used for destroying parasitic insects, and for itch; Ointment and Decoction being the form of application; there is a concentrated Tincture which is sometimes used externally for the same purposes as white Hellebore. 2, *D Consolida* (Larkspur). The seeds of this plant have the same properties as the above; the Tincture has been given in spasmodic asthma: dose 10 to 20 drops three times a day.

The active principle of both these plants is called *Delphinia*; it is sometimes applied locally for neuralgic and rheumatic pains, and in paralysis instead of *Veratria*.

Deltoidis (Greek letter delta, Δ and *eidos* likeness. The name of a muscle of the *Humerus* (which see).

Dementia (Latin *de* from, and *mens* the mind). Idiotcy, Want of Intellect.

Demi-Bain (French for half-bath) sometimes applied to the hip-bath

Demonomania (Greek *dæmon*, a demon; and *mania*, madness). A kind of madness in which the patient supposes himself possessed by demons. See *Mania*.

Demulcents (Latin *demulcio*, to soften). Medicines which have softening and soothing properties,; rendering them especially suitable for obviating the action of acrid and stimulant matters, not so much by correcting or changing their nature, as by involvthem, or the delicate tissues exposed to their action, in a mild and viscid fluid. Their chief employment is in catarrh, diarrhœa, gonorrhœa, dysentery, gravel, stone &c. They may generally be divided into two divisions, Mucilages and Expressed Oils; in the first, we have Almonds, Coltsfoot, Arabic and several other Gums, Linseeds, Mallows, Liquorice-root, Swinewort, Barley, Oats, and Wheat, Sago and Starch. Among the latter are most European and many foreign Oils, Fat, and other animal substances, including Hartshorn shavings, Gelatine and Isinglass, Spermaceti and Wax. The following is a pleasant and efficacious Demulcent Draught, suitable where there is fever:—Almond Mixture 1 ounce, Carbonate of Potash 10 grains, Syrup of Poppies 1 drachm; mix and add a tablespoonful of Lemon juice or 10 grains of Citric acid, and drink while in a state of effervescence. As a form for a cough mixture, easily prepared, take Oil of Almonds 6 drachms, Liquor of Potash 1 drachm, shake well and make up to 8 ounces with Rose or plain water; sweeten with Syrup of Poppies and add Paregoric Elixir, 2 drachms, or Tincture of Squills, if required to be more expectorant. The best demulcent enema is made by dissolving 6 drachms of Starch in half-a-pint of hot water, add 1 drachm of Tincture of Opium if necessary.

Dens, Latin for a tooth, plural *Dentes*, (see *Teeth*). Hence also comes *Dentition*, cutting the teeth; *Dentrifice*, Tooth-powder (which see); and *Dentata*, the name of the second vertebra, so called from its projecting, tooth-like processes.

Denudation (Latin *denudo*, to make bare). The laying bare of any part in operations.

Deobstruents (Latin *de*, and *obstruo*, to obstruct). Medicines to which are imputed the power of removing unnatural obstructions from any part of the body; they were formerly much used, and depended on, in medical practice, but latterly have fallen greatly into disuse, especially as internal remedies for diseases; Cod Liver Oil, Iodine, and Mercury, with stimulating liniments and friction are the only Deobstruents employed by modern practitioners.

Dephlegmation (Latin *de*, from, and *phlegma*, a watery distilled fluid). The process by which a body is deprived of its water, as by *distillation*, with which the term is synonimous, as it is with *Concentration*.

Dephlogisticated (Latin *de*, from, and *phlogiston*, the inflammable principle). Hence we have *Dephlogisticated Air*, that is, air oxidised, or deprived of its phlogiston—Oxygen Gas; and *Dephlogisticated Marine Acid*, Oxymuriatic Acid, or *Chlorine*.

Depilatory (Latin *de*, from, and *pilus*, hair). Any application for removing hair from the body. It was customary of old to apply pitch to the part to be denuded, and then pull it away forcibly, bringing the hairs with it; but this rude and barbarous practice is now discontinued. Most of the Depilitaries advertised contain Orpiment, which being a preparation of Arsenic, should be used with great caution, on account of the danger of absorption; the following simple and innoxious form is perhaps as efficacious as any:—Quicklime and Carbonate of Potash of each 2 ounces, Orris Powder 1 ounce, mix, and keep in a well-stopped bottle; when required for use, make up into a paste with water; apply to the parts, and wash off when dry.

Deplumation (Latin *de*, and *pluma*, a feather). A disease of the eyelids, in which the hair falls off. See *Eye*.

Deposit (Latin *depono*, to lay down). A sediment: medically, the term is generally applied to the urinary deposits which have been divided by Dr. Prout into three classes—the *Pulverulent*, or Amorphous Sediments; the *Crystalline*, or Gravel; and the *Solid* Concretions, or Calculi, formed by the admixture of the two first. See *Calculus*.

Depressor (Latin *deprimo*, to press down). A muscle which is called into action on the depressing of any part, as those of the ala, of the nose, of the angle of the mouth, and of the lower lip.

Derbyshire Neck. A name given to an unnatural enlargement of the glands of the neck, because it is of more frequent occurrence in the hilly parts of Derbyshire than elsewhere; it is the same disease as *Goitre* (which see).

Derivation (Latin *derivo*, to drain off). A drawing away of the fluids of an inflamed part by applying blisters, &c. over it, as in pleurites; or by means of mustard poultices, or baths to the feet, or other extremities. Agents employed to produce this effect are termed *Derivatives*.

Derma (Greek for the *Dermis Chorium*, or True Skin, in Latin *Cutis vera*). From the same root, we have *Dermic* applied to the action of remedies on the skin, and *Dermoid* applied to tissues which resemble the skin (which see), and *Cuticle*.

Derosne's Salt, sometimes called *Narcotine*, or *Opiane*; it is obtained by treating opium with ether. See *Opium*.

Dessication (Latin *dessico*, to dry up). The operation of drying; hence and from *squama*, a scale, comes *Desquamation*, the falling off of the cuticle in scales, which sometimes takes place after fevers, and in some cutaneous diseases. See *Skin*.

Detergents (Latin, *detergo*, to wipe away). Medicines which cleanse and remove such viscid humours as obstruct the vessels. Also such outward applications as serve to cleanse foul ulcers, for example, Honey, Tincture of Myrrh, Solution of Ammoniated Copper, Turpentine, &c.

Determination (Latin *de*, from, and *terminus* a bound). A flowing of blood to any particular part, as to the brain; thus we speak of determination of blood to the head, &c.

Detrusor Urinæ (Latin *detruo*, to thrust out). A muscle which expels the urine. See *Bladder*.

Dia (Greek preposition). This word is the prefix to a great number of medical terms, as will be seen by the following:—

Diabetes (Greek *betes*, a siphon). An immoderate flow of urine, distinguished as first *Insipidus*, (tasteless), when the urine retains its usual taste; and second, *Mellitus* (honied), when it is characterized by a saccharine taste. Generally speaking these may be considered as two stages of the disease, the urine being at first clear and without other than the usual taste, and afterwards becoming cloudy and sweet.

The chief *causes* of Diabetes are intemperate living, excess of venery, copious evacuations of the bowels long continued, frequent use of diuretics and acrid drinks, or it may be hard labour and poor living, or aught which tends to impoverish the blood. The best physicians consider it "an impaired action, or morbid change. in the natural powers of assimilation and digestion, which forms the proximate cause of the disease."

The *symptoms* are a frequent and copious discharge of urine, containing eventually, if not at first, a large proportion of saccharine and other matter. There is gradual emaciation, voracious appetite, great thirst, weakness, and disinclination to motion; the alimentary process is improperly performed, and thus the food taken does not yield its proper amount of nourishment, and constitutional derangement is the consequence.

Treatment. The diet should be entirely animal food—all vegetable substances to be avoided—the bowels to be kept quietly open with pills of Aloes and Soap, emetics and diaphoretics occasionally administered, perhaps the compound Ipecacuanha Powder, 10 grains at bed time is the best; alkaline drinks, such as Soda Water, may be given with advantage, and blisters and issues applied to the regions of the kidneys, covering the skin with flannel, anointing it with Camphorated Oil, using the warm bath and the flesh brush are also good, as are Chalybeate and Sulphurated Waters. Tonics, astringents, and stimulants will be of service, especially preparations of Iron with Tincture of Cantharides; if in the summer, sea-bathing, and anything which may serve to invigorate that system: such is an outline of general treatment; of course constitutional peculiarities require special and appropriate remedial measures, and of these only the professional adviser can judge.

Diachylon (Greek *xylos*, juice). An emollient digestive plaister, formerly prepared from expressed juices of plants; the *Emplastrum Plumbi*, of the London Pharmacopœia, is that which now goes by the name of Diachylon; it is made of the Oxide of Lead (Litharge) boiled with Olive Oil in water; it is a good dressing for wounds and ulcerated surfaces, but is chiefly used as a basis for other plaisters; it is less stimulating than the Resin or common Sticking Plaister, which is also frequently called Diachylon. See *Plaisters*.

Diæresis (Greek *ireo*, to divide). A stoppage, or division in the continuity of a disease.

Diagnosis (Greek *ginosko*, to discern). This is the art of discovering the nature of diseases, and of distinguishing them one from another. In medical treatment much, very much, depends upon a correct diagnosis; it is the basis whereon to found remedial measures; and great care should be taken to have this very correctly laid down, or the whole course of treatment will probably be like an argument reasoned from false premises, and no good results may be expected, but rather bad ones. In *diagnosing* a disease, the true man of science will note the most minute circumstances, and it is only by careful study, and close attention to symptoms, that it can be properly done.

DIAPHORESIS (Greek *phoreo*, to carry). Increased perspiration: from the same root comes also

DIAPHORETICS. Medicines which increase the natural exhalations of the skin; if they are not so powerful as to occasion actual perspiration they are called *Sudorifics* (which see). The difference in the operation of these two classes of remedies is not in kind, but in degree only. Diaphoretics may be divided into five orders, viz.: 1. *Pungent*, as the Volatile Salts and Essential Oils, which are more especially adapted for aged persons, on whom other diaphoretics have little effect; 2. *Calefacient*, which excite a degree of warmth in the parts to which they are applied, and, like the last, are given where the circulation is low and languid; Serpentaria, Contrayerva, and Guaiacum, may be mentioned as common examples of this order; 3. *Stimulant*, best fitted for vigorous and plethoric habits; such are the preparations of Antimony and Mercury; 4. *Antispasmodic*, such as Camphor, Musk, and Opium, given to promote a diaphoresis when the circulation is too full and rapid; 5. *Diluent*, such as Water, Barley Water, thin Gruel, Whey, &c., given when it is desirable to promote perspiration, and so check the course of active diseases. The following are among the principal diaphoretics: Antimony, Oxide of, dose 1 grain to 10; Powder of, 5 to 20 grains; Tartarized, ⅛th to 1 grain; Camphor, 5 to 20 grains; Contrayerva, 10 to 30 grains; Dover's Powder, 5 to 20 grains; Guaiacum, Resin or Wood, 10 to 30 grains; Liquor of Acetate of Ammonia, ½ to 1 drachm; Liquor of Carbonate of Ammonia, same; Nitrate of Potash, 5 to 10 grains; Spirit of Ammonia, ½ to 1 drachm; of Nitric Ether, 10 to 20 drops, &c.

The efficacy of diaphoretics is much increased by combinations with each other.

DIAPHRAGM (Greek *phrasso*, to divide). This is the transverse muscle which separates the thorax from the *Abdomen* (which see, also *Midriff*); its arteries are termed *diaphragmatic;* inflammation of the organ is called *diaphragmitis*, and the disease which we now call *Angina Pectoris* (which see), among old medical writers went by the name of *diaphragmatic gout*.

DIARRHŒA (Greek *reo*, to flow). Looseness of the bowels, sometimes called *Flux* (which see). This is a very common disorder, arising from a variety of *causes*, foremost among which may be mentioned suppressed perspiration, a sudden chill or cold applied to the body, acid fruits, or any indigestible food, oily or putrid substances, deficiency of bile, increased secretion of mucus, worms, strong purgative medicines, gout or rheumatism turned inwards, &c. Hence diarrhœa may be distinguished as *bilious*, *mucous*, *lienitery* (where the food passes unchanged), *cœliac* (where it passes off in a white liquid state, like chyle), and *verminose*, produced by worms.

The *symptoms* are frequent and copious discharges of feculent matter, accompanied usually with griping and flatulency; there is weight and uneasiness in the lower belly, which is relieved for a time on the discharge taking place; there is nausea, often vomiting; a pale countenance, sometimes sallow; a bitter taste in the mouth, with thirst and dryness of the throat; the tongue is furred and yellow, indicating bile in the alimentary canal; the skin is dry and harsh, and if the disease is not checked great emaciation ensues.

The *treatment* must depend in some degree on the cause; the removal of the exciting matter, by means of an emetic, or aperient medicines, will, however, be a safe proceeding at first; if the Diarrhœa be caused by obstructed perspiration or exposure to cold, nauseating doses of Antimonial, or Ipecacuanha Wine, may be given every three or four hours, the feet put into a warm bath, and the patient be well covered up in bed. When the case is obstinate, resort may be had to the vapour bath, making a free use of diluents and demulcents. Where there is acidity of the stomach, denoted by griping pains and flatulency, take Chalk Mixture, with Aromatic Confection, and other anti-acid absorbents or alkalies, such as Carbonate of Potash, with Spirits of Ammonia, and Tincture of Opium, or some other anodyne; if from putrid or otherwise unwholesome food, the proper course, after the removal of the offending matter, is to give absorbents, in combination with Opium, or if these fail, acid and an anodyne; the following is an efficacious formula: Diluted Sulphuric Acid, 2 drachms; Tincture of Opium, ½ a drachm; Water, 6 ounces; take a tablespoonful every two hours. When the looseness proceeds from acrid or poisonous substances, warm diluent drinks should be freely administered, to keep up vomiting, previously excited by an emetic; for this purpose thin fat broth answers well; a purge of Castor Oil should also be given, and after its operation, small doses of Morphine, or some other preparation of Opium.

When repelled gout or rheumatism is the cause, warm fomentations, cataplasms, blisters to the extremities, and stimulant purges, such as Tincture of Rhubarb, to be followed by absorbents with anodynes; if worms are the exciting cause, their removal must be first attempted, but drastic purgatives, often given for the purpose, are dangerous; in this case, Turpentine and Castor Oil, 1 drachm of the first and 6 of the last, may be recommended. The Diarrhœa which often occurs in childhood during teething, should not be suddenly checked, nor at all, unless it prevails to a hurtful extent; if necessary to stop it, give first a dose of Mercury and Chalk, from 2 to 4 or 6 grains, according to age, and then Powder of Prepared Chalk, Cinnamon, and Rhubarb, about 2 grains of each every four hours. Diarrhœa sometimes attacks pregnant women, and, in this case, its progress ought to be arrested as quickly as possible. In all cases of looseness of the bowels it is best to avoid hot thin drinks, unless given for a specific purpose; the food, too, should be simple and easy of digestion; Milk, with Cinnamon boiled in it, thickened with Rice or Arrowroot, is good; vegetables, salt meat, suet puddings and pies are not; if there is much exhaustion, a little cool Brandy and Water may be now and then taken. When Diarrhœa is stopped, astringent tonics, with aromatics, should be given to restore the tone of the stomach.

This disease may be distinguished from *Dysentery* (which see) by being unattended by either inflammation, fever, contagion, or that constant inclination to go to stool without a discharge, which is common in the latter disease, in which the matter voided is sanguineous and putrid, while that in Diarrhœa is simply feculent and alimentary.

DIARTHROSIS (Greek *arthros*, a joint). Any moveable connection of *Bones* (which see) and *Joints*.

DIASTOLE (Greek *diastelio*, to dilate). The dilation of the heart and arteries; it is the opposite of *Systole* (which see).

DIASTASIS (Greek *diïstemi*, to separate). A forcible separation of bones without a fracture.

DIATHESIS (Greek *tethemi*, to arrange). The state of the body, or constitutional arrangement. See *Idiosyncracy*.

DIORTHOSIS (Greek *ortho*, to regulate). The restoration of parts to their proper situation; this was one of the ancient divisions of *Surgery* (which see).

DICROTIC (Greek *dis*, twice, and *krono* to strike). A term applied to the pulse when there appears to be a double pulsation.

DIDYMI (Greek *didymus*, double). Twins; a term formerly applied to the testes, whence *Epididymis*, that which lies above the *Testes* (which see).

DIET (Greek *diaita*, regimen). Applied here to the food proper for invalids. In the treatment of disease much undoubtedly depends upon the nature and proper regulation of the food taken, to which the wise practitioner will pay as much attention as to the medicines he prescribes; indeed, many diseases might be cured simply by conforming to certain dietetic rules, if the sufferers had but patience to wait for nature to work a cure. But generally speaking they have not; often it is a matter of necessity, that a more speedy restoration to a state of partial, if not complete, health should be effected or attempted; and therefore "the doctor" is urged to use active remedies, and reduced to the necessity of making the diet subsidiary to the main plan of treatment. We may here observe that *La diete* of the French physicians is a phrase signifying extreme abstinence; that *Dietetics* is that part of medicine which refers to the diet, and that *Diet Drink* is a name for Decoction of *Sarsaparilla* (which see), also *Food*, *Regimen*.

DIGASTRICUS (Greek *dis*, twice, and *gaster*, the belly). Having two bellies, a term applied to the *Os hyoides* (which see).

DIGESTION (Latin *digero* from *diversion* and *gero* to carry to different points). The Physician, the Surgeon, and the Chemist, have each a different meaning for this word; with the first it is the change of the food, on its passing into the stomach, to *chyme*, or the absorption and distribution of its nutrient parts in the form of *chyle* through the system; with the second it means bringing a wound into a state in which it forms healthy pus; applications which promote this object being called *digestives*; with the third it is the continual action of a solvent upon any substance; thus certain ingredients are *digested* in spirits of wine to make a tincture and so on. But it is with the Physician's definition that we are now chiefly concerned, and this may be comprehensively stated in the process, or rather processes, by which food is fitted for the nourishment of the body; masticated in the mouth, and then mixed with saliva, it passes down the throat into the stomach, where it is subjected to the action of the gastric juice; it is then mixed with the bile and juice from the pancreas, and conveyed through the small intestines—such of it as is not absorbed into the blood—and otherwise taken into the system, is thus conveyed through the large intestines, or colon, from whence the useless part of it is discharged in the form of *Fœces* (which see). It will thus be seen that many organs are concerned in the work of digestion, and the importance of the proper performance of their several duties will be easily understood, nor will any wonder be felt that one or other of them is frequently out of order, and that Indigestion, or complaints arising from it, should be so constantly complained of, more especially when it is considered how little care is generally taken as to the quantity and quality of the food submitted to these processes. Generally speaking, too, we eat not only what is unfit for the purposes of digestion and nutrition, not only at improper times, and in insufficient or overloading quantities; but we do it in too great a hurry, presenting the food to the action of the gastric juice in an unfit state, for want of due mastication. Then again we seldom take the proper rest after full meals, so as to allow the various organs concerned in this work, so necessary to our health, a fair chance of duly performing their offices; nor do we keep our bodies in such a state or position as to facilitate their operations. What wonder then that we are so often afflicted with Indigestion and its train of concomitant evils. Let us take good wholesome food, at regular intervals, avoid unnecessary exposure to cold and damp, and excesses of all kinds, keep the pores of the skin clear by bathing and rubbing, and attend to those sanatory rules with which we are all acquainted, and the work of digestion will go on smoothly enough, provided there is no disease in any of the organs concerned to check it; for diagnosis and treatment of each, reference must be made to the several heads of *Bowels*, *Indigestion*, *Stomach*, *&c.*

Digestive Salt. A name formerly applied to the *Muriate of Potash* (which see).

Digitates Purpurea (Latin for the Purple Foxglove). A familiar British wild plant, whose leaves are sedative and diuretic; its active principle is called *Digitalis.* See *Foxglove.*

Digitus (Latin *digere*, to point out). Hence we have *D. manus*, a finger; *D. index*, the fore finger; *D. medius*, the middle finger; *D. annularis*, the ring finger; *D. auricularis*, the little finger; *D. pedes*, a toe; and *Digital*, the designation of the arteries of the fingers (which see) also *Toes.*

Dilatum (Latin *dilato*, to enlarge) applied to the heart. It may be either temporary, as the *dyastole* of the organ, or permanent, as its *passive aneurism.* See *Heart.*

Dill. A plant, the seeds of which are carminative and stimulent. See *Anethum*

Diluents (Latin *diluo*, to dilate). Watery drinks which increase the fluidity of the blood and render several of the secretions and excretions less visid. Under this head may be included all *Demulcents* (which see), with Gruel and Barley Water, Beef Tea, Chicken and Mutton Broth, Infusion of Balm, of Tea, and several other plants; Plain and Toast Water, Whey, &c. Diluents are of great value in many ways. They promote the operation of more active medicines, especially aperients and diuretics; they reduce the quality of the blood, and therefore assist in subduing acute inflammation; they promote perspiration, and so relieve the system in fevers and bilious disorders; they are also useful in catarrhal and phthisical complaints; in *Diarrhœa*, *Dysentery*, *Calculous affections* and *Stranguary* (all of which see).

Diploe (Greek *diplous*, double). The cellular osseous tissue between the two tables of the *Skull* (which see).

Diplopia (Gr. *diplous* and *ops*, the eye). Double sight (Latin *visus duplicatus*). This is a disease of the eye in which the person sees an object double or triple; it is of two kinds—first, when objects have this appearance only when looked at with both eyes; and second, when they so appear whether surveyed with both or one. See *Sight.*

Dipso-Mania. This is a species of monomania, with which habitual drunkards are sometimes affected. It has been described as "a morbid craving for drink, which generally occurs at intervals, in which persons are seized with an irresistible propensity to drink to excess, although conscious at the time of their misconduct, but are unable to control themselves. See *Intemperance.*

Director (Latin *dirigo*, to direct). A narrow, groved instrument of silver or steel, used by the surgeon to direct his knife in performing *operations* (which see).

Dirigens (same root). An old term applied to that constituent in prescriptions, which was supposed to direct the operations of the other remedies; thus Nitre, in conjunction with Squills, is diuretic; with Guaiacum, it is diaphoretic. See *Prescriptions.*

Discutients (Latin *discutio*, to shake to pieces). Substances which have the power of resolving tumours, or more properly, of dispersing the morbid matter of which they are composed; for this purpose, preparations of Ammonia and of Lead are very commonly used. The following is a good formula for a a discutient lotion:—Liquor of Acetate of Lead (Goulard's Extract) ½ a drachm; Solution of Acetate of Ammonia 2 ounces; Water 6 ounces; add 2 drachms of Laudanum if the surface for which the application is required be painful and irritable.

DISEASE. This is a departure from the healthy state of the system generally, or of any of its parts or organs; mere functional disorder does not amount to disease, although it very commonly proceeds from some change of structure, to which the term will properly apply; indeed it is probable that there rarely, if ever, exists functional disarrangement without organic disease to a greater or less extent, although its presence cannot all times be detected. Diseases have been divided into ten classes—viz., 1. *Acute*, when they are severe and of short duration; 2. *Chronic*, when of long continuance; 3. *Sporadic*, resulting from occasional or accidental causes, as cold, fatigue, &c.; 4. *Epidemic*, owing to a prevalence of excessive heat, contagion, &c.; 5. *Endemic*, prevailing in localities caused by marsh miasma, &c.; 6 *Intercurrent*, that is the sporadic form occurring in the midst of Endemic or Epidemic diseases; 7. *Contagious*, disseminated by contact or touch; 8. *Infectious*, propagated by effluvia, or the breath of patients crowded too much together; 9. *Eruptive*, skin diseases; 10. *Febrile*, fevers. It must be evident, however, that some diseases will come under more than one of these heads; thus cholera, as far as its nature can be understood, is at once acute, epidemic and contagious or infectious—some contend that it is both; so that this classification is not very distinctive.

It is often extremely difficult to trace the origin of Disease. Many persons have an hereditary tendency to one or other of its forms; this is especially the case with scrofula, consumption, gout, gravel, rheumatism, and affections of the brain producing insanity or imbecility; climate and food have, of course, much to do with the setting up of organic disease, which will often proceed from causes in themselves very trifling. A depressed state of the mind renders a person more liable to certain diseases than he would otherwise be, and the fear of an epidemic will at times be certain to produce an attack; hence persons who have a firm reliance upon an all-seeing and directing Providence, to keep the mind calm in the midst of danger, will be more likely to escape than those who are doubtful and desponding. Among the most common existing causes of Disease, may be named certain occupations. To these we have already alluded, under the head of *Consumption*. It may also be observed, that one disease is frequently the exciting cause of another; thus apoplexy frequently results from disease of the heart and paralysis of the brain. As to modes of prevention, treatment, &c., reference must be made to the heads under which diseases are severally described.

DISCHARGE. Applied as a medical term generally to all substances cast out of the body, but in a more restricted sense to the purulent matter from *Abscesses*, *Ulcers*, and *Wounds* (which see).

DISINFECTION. The purification of infected air by means of *Disinfectants*, agents which act by dispersing or diluting the particles prejudicial to health, as fresh air and water; by destroying or altering their chemical composition, as heat, chlorine gas, muriatic acid, &c.; or by absorption, as quick lime, and charcoal. These disinfecting agents are very serviceable in sick chambers, hospital wards, and many other places where the germs of disease are present in the atmosphere; but the greatest disinfectants after all are *cleanliness* and *ventilation*, and these are within the reach of most persons. See *Air*, *Chlorine*, *Contagion*.

DISLOCATION (Latin *disloco*, to put out of place). The displacement from their natural position of bones articulated together. See *Luxation*.

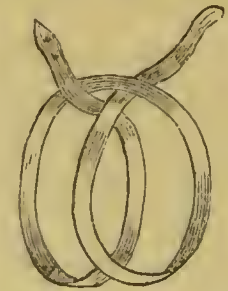
Dislocations may be either complete or incomplete; in the first, the articular surfaces remain partially in contact, which can only occur in the foot, knee, and ankle; in the last, there is an entire separation. They are also distinctively named, according to their direction, as upward, downward, forward, backward, &c.; or to the circumstances which accompany them, as first *simple*, when there is no wound communicating with the joint, and externally with the air; second, *compound*, when there is such a wound. They are also called *spontaneous* when they occur in consequence of disease destroying the cartilages, ligaments, and articular cavities of the bones. Some dislocations, as those of the humerus, have also been distinguished as *primitive* and *consecutive*, the first being the sudden effect of external violence, and the second following this by the influence of other causes, as a fresh fall before the connection of tho two joints has taken place.

Nearly all the bones of the human body are liable to displacement, but some are much more so than others, such are those of the hip, the ankle, the shoulder, the elbow, the lower jaw, the fingers and toes, and in these joints the detection of the dislocation is tolerably easy, even to the unprofessional person; but with many other parts it is extremely difficult of detection, therefore, a surgeon should always be called in when an accident has occurred in which there is likely to be such a result.

The symptoms of a dislocation having taken place are loss of power in the limb or member, which becomes fixed in one position, any attempt to move it causing extreme agony; there is also a sensation of numbness in the part, and the patient feels sick and faint, probably on account of the severe pain; an examination of the joint also will show a deformity.

Treatment. It is useless in such a case to apply fomentations or stimulant liniments; attempts should at once be made to "reduce" the dislocation, as it is called: until this is done there will be no relief for the patient, and the longer it is delayed the more difficult will the operation be, because the muscles, which are at first relaxed by being drawn out so far as to allow the joint to slip out of its socket, or from its point of articulation, resume their former rigidity, and exert a greater power in opposition to the efforts of the operator.

Whenever there is a doubt as to the nature of the injury which has happened, it is always best to wait the arrival of a surgeon before making any violent efforts to reduce what is supposed to be merely a dislocation, but may in reality be that in combination with a fracture, or an injury of quite another kind; but when the case is tolerably clear, no time should be lost in effecting the reduction; this may be done by drawing down the limb or members until the ends of the dislocated joints are brought as nearly together as possible, then if the pressure is relaxed, the muscles will generally draw them into their proper position, and hold them there; care should be taken to keep the upper bone of the two which it is desired to connect firmly fixed, so that in pulling the lower, the downward or outward, as the case may be, does not follow it, and so prevent the necessary extension of the muscles. If the dislocation is in the humerus, or shoulder, a very common part, pass a sheet or strong towel round the body of the patient, and fasten the ends to a staple in the wall, or some other fixed support, then take another towel, and making what is called a "clove-hitch," slip it over the elbow, draw it tight, and give the ends to two or three strong assistants, who must pull gently, yet firmly and steadily for some minutes, while the operator, with his knee beneath the armpit, endeavours by raising and depressing the bone as it is drawn out, to direct it so that, when it has attained a point of extension beyond the edge of the socket from which it has been displaced, it will slip back into it. A dislocation of the shoulder may be either forwards or backwards; although the latter is a rare case, it may be known by the swelling at the shoulder-blade, the flatness of the outside, and incapacity of movement; the reduction may be effected in the same way as above described. After it is accomplished, it is most prudent, in either case, to keep the arm confined to the side for some days by means of a bandage, as it may be thrown out again by the slightest attempt to use the limb.



Dislocation of the Collar Bone, may occur at either end, but it is difficult for a non-professional man to detect this, and if such an injury is suspected, it is best to summon surgical aid, compressing the parts until it arrives, with a crossed bandage. This accident, however skilfully treated, usually results in some permanent deformity.

Dislocations of the Elbow are the most difficult to understand and to reduce of any, on account of the complication of joints at that part, where it must be remembered, three bones meet, viz., the arm-bone (*humerus*), and the two bones of the fore-arm (*radius* and *ulna*), the second of which may be dislocated by itself, backwards or forwards, and the last only backwards, carrying the radius with it; two lateral displacements of the bones of the fore-arm, also sometimes occur, and lastly, and rarely, a displacement in which the cartilaginous surface of the humerus rests between the radius and ulna; it must be evident that a thorough knowledge of the anatomy of the parts is required for the reduction of either of these, therefore, we need not enter into a description of the means to be used.

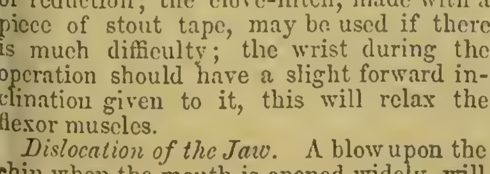
Dislocation of the Spine is the most serious that can happen; in this case, death is sure to ensue, and it usually takes place soon after the accident, which happily is of very rare occurrence; but little can be done to remedy this mischief, and that little must be under the direction of the professional adviser.

Dislocation of the Ribs sometimes, though rarely, takes place, and this is very difficult of detection; the treatment is the same as that of a *Fracture*, which see.

Dislocation of the Pelvic Bones and *Os Coccygis*. These are both of extremely rare occurrence, immense force being required to effect either of them; they cannot be treated by other than a surgeon, and have generally a fatal result.

Dislocations of the Wrist Joint are generally caused by the hand receiving the weight of a heavy fall; it may be of three kinds, all of which may be distinguished from a sprain by the unnatural bony projections, either in the front or back, as the case may be, in contradistinction to the soft swelling only which is set up by the latter. The mode of reduction is this: let the patient's arm be grasped firmly, just above the elbow, by an assistant, while the operator, supporting the fore-arm with his left hand, takes hold of the patient's hand with his right, and the two exerting their force in opposite directions, produce the extension necessary to replace the joints in their natural position. After the reduction a roller bandage should be applied round the wrist, and a splint bound before and behind the fore-arm, passing on either side down as far as the metacarpal bones.

Dislocation of the Fingers and Toes are of rare occurrence, and when they do happen, it is generally between the first and second joint; they may be easily known by the projection of the dislocated bones, and reduced without much difficulty, if done soon after the accident. The following cut from Fergusson's Surgery, will show the method of reduction; the clove-hitch, made with a piece of stout tape, may be used if there is much difficulty; the wrist during the operation should have a slight forward inclination given to it, this will relax the flexor muscles.



Dislocation of the Jaw. A blow upon the chin when the mouth is opened widely, will sometimes cause this, as will yawning or gaping very deeply; by it the patient is placed in a very awkward position, with his mouth set wide open, as represented in the accompanying cut, and no power to close it or to articulate words. This kind of dislocation may be either complete or partial; in the latter case the mouth is not opened so widely as in the former, and it may be known by the chin being thrown on one side, opposite to that of the displacement. There is not usually much difficulty in reducing a dislocation of the lower jaw, the upper cannot be dislocated; the plan is to wrap a handkerchief round each thumb, and placing them in the inner angles of the jaw, the coronoid processes as they are termed, endeavour by forcing it backwards and downwards, to restore it to its proper position. Success will generally attend the effort, if only a moderate degree of force be used, especially if it be by a skilful hand. Some put a transverse piece of wood into the patient's mouth, to serve the purpose of a lever, but this is a rough method of operating, and no really skilful surgeons resort to it.

Dislocation of the Hip Joint is one of the most frequent causes of lameness; it may be caused by a fall, or coming down heavily on the feet from a leap, and frequently occurs to children through the negligence of servants. A careful mother will take note of the slightest alteration of the gait of her child, and institute an examination at once, for sometimes the displacement of the hip-joint in the young is attended with little or no pain, and the limping gait is its only obvious indication, unless it be a manifest disinclination to walk at all; if it be a child in arms to whom the accident has occurred through the carelessness of its nurse, the injury may remain undiscovered until the displaced joint has become too firmly fixed in its unnatural position, ever to be restored to its natural one, and a shortened limb, producing lameness for life is the consequence. By a very slight examination of the part, however, a dislocation of this kind may be detected; there is a very considerable projection of the bone backward, the thigh is drawn back, and the knee inclines inward, and is raised above its fellow knee, so that the foot is raised from the ground; the whole limb, too, is for a while immoveably fixed. Of the dislocation of this joint, there are four distinct forms which we need not pause to describe: in each of them the reduction must be effected in the same way. Place the patient on a bed, with a strong towel, or sheet, passed between his legs and brought up round the hip; let the ends of this be fastened to some firm support, such as a stout stick passed across a doorway; then fix another towel to the thigh by means of a clove-hitch, and let three or four strong men take hold of the ends and keep up a steady strain for a quarter of an hour, or more if it be necessary; the muscular power of the patient, if it be an adult, should have been previously weakened by bleeding, or Tartar emetic given in half-grain doses every ten minutes until nausea is produced; this should be done in all cases of difficult reduction. The administration of Chloroform will have much the same effect, and will likewise produce insensibility to pain. Sometimes, in such cases as these, a strap, with a pulley fixed to the wall, is used to effect the extension; most hospitals are furnished with this apparatus, and employ it constantly.

As dislocation of the hip-joint is sometimes confounded with fracture of the neck of the bone within the capsular ligament, and as great mischief might result from applying extension in such a case, it will be as well to observe, that in fracture, the knee and foot are turned outward—in dislocation, inward.

Dislocation of the Patella is frequently produced by a person falling with the knee turned inwards, and the foot outwards; it may be in either of three directions—outwards, inwards, and upwards. The method of reduction is to place the patient on a bed, and raising his leg by lifting it at the heel, press on the edge of the dislocated bone, which is furthest from the articulation, until the inner edge is raised over the erudella of the former, and is thence drawn into its place by the action of the muscles. Evaporating lotions should then be applied until the inflammation is subdued, when the part may be bandaged. When the dislocation is upwards, the ligament of the patella is torn through, and in consequence there is generally a great deal of inflammation. Leeches are usually required, and cold lotions for six or seven days, after which the leg must be kept suspended by a splint and rollers until a union of the ruptured ligament is effected.

Dislocation of the Tibia, at the knee joint, may be complete or incomplete, upwards or backwards; in either case, simple extension is sufficient to reduce it.

Dislocation of the Femur is commonly caused by a person striking his toe against some projecting body when the face is averted; he feels immediately pain at the knee, which cannot be completely extended. To effect the reduction of this it is necessary to bend the limb backwards as far as possible; by this the pressure made by the thigh-bone is removed, and the cartilage slips back into its place; when once this accident has occurred, it is very likely to happen again, to prevent which a linen bandage, with four straps, should be bound tightly above and below the patella.

Dislocation of the Ankle Joint may be either inwards, outwards, or forwards; in the first case it may be the result of a jump from a considerable height, or sudden check of the foot when running, the body by the impetus being carried forward. In the second, the foot is probably twisted in running or leaping, or, it may be that the passing of the wheel of a carriage over the leg causes the injury. Jumping from a carriage in rapid motion, or falling backwards with the foot confined, will probably cause the third form of displacement. Only a surgeon can detect the difference in these forms of knee-dislocation, and adopt the measures proper for their reduction; there is great likelihood that they will occur again, having once happened, therefore it is best to keep the ankle bandaged or supported by means of an elastic stocking.

Compound Dislocations most frequently happen at the ankle, elbow, and wrist, scarcely ever at the hip; the reduction should be effected without delay, and with as little violence or disturbance as possible. When the end of the bone protrudes it should be carefully examined, and, if necessary, washed in warm water, that no dirt or other foreign particles adhere to it to produce irritation, and keep up the suppurating process in the joint. The opening in the skin in these cases is caused by the protrusion of the bone, or by violent contact of the part with some hard angular substance; sometimes the end of the bone is shattered, and then the detached pieces should be carefully removed with the fingers; the opening to be enlarged with the scalpel for this purpose, should it be desirable. This is also sometimes necessary to be done for effecting the reduction. In these cases there is often much fever, and the patient perishes from the violence of the first paroxysm. Such dislocations as these are very dangerous, sometimes it is only by amputation of the limb that the patient's life can be saved; closing the wound with slips of adhesive plaister, applying splints with a roller bandage, to be kept wet with cold water, poulticing; if there is surrounding inflammation applying leeches about the part.

Sir Astley Cooper has defined a dislocation to be the "removal of the articulating portion of a bone from that surface to which it is naturally connected." This removal, as we have shown, is generally effected by violence, and the primary object of remedial measures is to bring the point of articulation, or union, back to its natural position. When the muscles are only extended, and there is no laceration, or severance of a ligament, and no fracture of either of the bones, there is little difficulty in reducing common dislocations, if taken in hand shortly after their occurrence; but if the bones are suffered to remain long displaced, so that the muscles become accustomed, as it were, to their new position, there is sure to be permanent distortion, and most likely lameness of some kind. The displaced bone, at its new point of contact with other bones, forms a connexion therewith, and finds there a basis for its future movements and operations, it requiring as much force to remove it from thence, as it did from its more natural position—it must be, in fact, another dislocation. See *Joints*, *Muscles*.

Disordered Functions. This is a term frequently employed in medical practice, and it signifies any disarrangement in the regular and natural operations of the various organs of the body; it is in fact but another name for *Disease* (which see).

Dispensary (Latin *dispenso*, from *diversum penso*, to distribute by weighing). A place where medicines are compounded. More generally applied to an institution where the poor receive professional advice and medicines gratuitously.

Dissection (Latin *disseco*, to cut up). The art of separating, by means of the scalpel, the parts of organized bodies, so as to display their structure.. See *Anatomy*.

Distension (Latin *distendo*, to stretch). The stretching of a hollow viscera by too great an accumulation of its contents—as of the bladder in retension of urine, of the intestines with fæces, the veins with blood, or the stomach with wind. See *Flatulency*.

Distichia or Distichiasis (Greek *dis*, twice, *stichos*, a row). A term applied to an affection in which each eyelid has a double row of eyelashes, which inclining inwards irritate the eye. See *Opthalmia*, *Trichiasis*.

Dittander. The *Lepidium Latifolium*, a native plant, commonly called Pepperwort, sometimes used in acute rheumatism.

Distillation (Latin *distilio*, to drop by little and little). Is a chemical process, in which, by the application of a regulated heat to fluid substances, in a covered vessel called a *Still* (which see), the volatile constituents ascend in vapour into what is called the worm of the still, and meeting there a cooler atmosphere, are, by condensation, reduced to a liquid state. *Dry Distillation* is performed in the same way, except that the substance is not previously dissolved in any menstruum; and *Destructive Distillation* is the subjection of bodies to a red heat in close vessels, and collecting the results. This is also called *Sublimation*.

Distilled Water. Water which has passed through the process of *Distillation* (which see) also *Aqua;* it may be either pure, or impregnated with the flavour and principle of some herbs, as Anise or Carraway Seeds, Cassia or Cinnamon Bark, Elder Flowers, Fennel Seeds, Laurel Leaves, Peppermint, Spearmint, Pimento Berries, Penny-royal, and Rose Leaves, which constitute the principal of the medicinal distilled waters.

Distoma Hepaticum (Greek *dis* twice, *stoma* the mouth, and *epar* the liver). A worm sometimes found in the liver and gall bladder of man, but more frequently in those of sheep and goats. See *Vermes*.

Distrix (Greek *dis*, twice, and *thrix*, the hair). A disease of the hair in which it splits at the ends. See *Hair*.

Distortion (Latin *distorqueo*, to wrest aside). A term applied to an unnatural twisting of the *Spine*, or *Limbs* (which see).

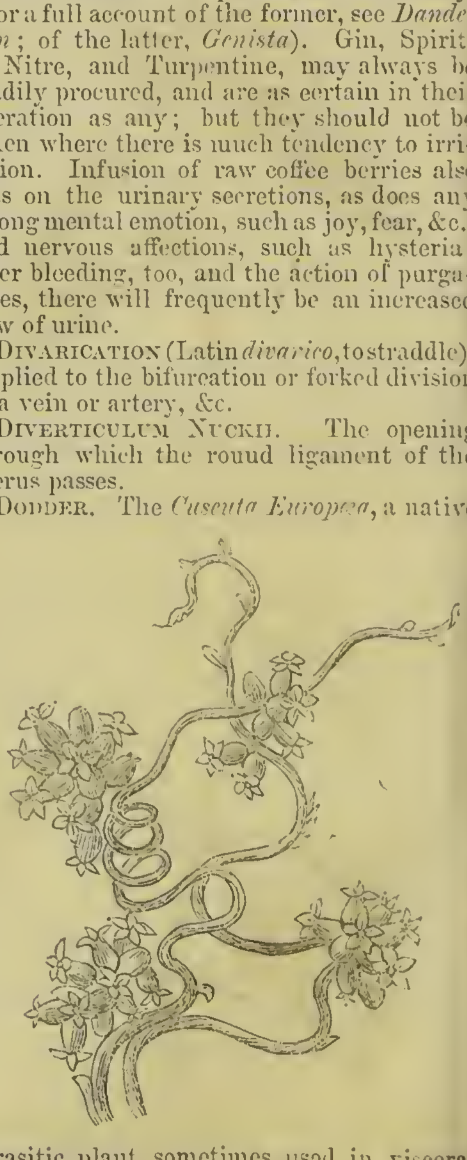
Diuresis (Greek *dia* through, and *oyreo* to make water). An excessive flow of *Urine* (which see). Also *Bladder* and *Kidneys*.

Diuretics (same root as above). Medicines which augment the urinary discharge; this effect will be produced by any substance which stimulates the secreting vessels of the kidneys. All the saline diuretics act in this way; they pass into the circulation, and appear to exert a specific action upon these vessels. The free drinking of mild diluents will also have this effect, while the application of external heat to the body will exert a contrary influence by exciting perspiration, which is an increased cutaneous secretion. Diuretics are useful as adjuncts chiefly; their action alone is not to be depended on for the cure of disease; they are merely palliatives. Thus, in dropsy, in which they are chiefly employed, if perfectly successful, they do but remove for a time a portion of the effusive fluid, which quickly collects again: they are sometimes useful in calculous affections, also in gonorrhœa, and they have a tendency to check profuse perspiration, and diminish plethora; but their frequent and constant use is very weakening to the system. The medicines of this class chiefly used are Broom (*Genista*), the tops in powder, dose, 1 scruple to 3; Bitter-sweet (*Dulcamara*), same dose; Dandelion, extract 10 grains to ½ a drachm; Foxglove (*Digitalis*), leaves and seed, ½ a grain to 3 grains; Juniper, berries and tops, 1 to 3 scruples; Meadow Saffron (*Colchicum*), root and seed, ½ a grain to 3 grains; Sarsaparilla, root powdered, 1 to 2 drachms; Snake-root (*Senека*), 1 to 3 scruples; Squills, root powdered, 1 to 3 grains; Spanish Flies (*Cantharides*) ½ a grain to 3 grains; Potash, Acetate of, 1 scruple to 3, Carbonate, 10 grains to 30, Nitrate, 5 to 10 grains, Subcarbonate 10 grains to 3, Supertartrate (Cream of Tartar) 2 drachms to one ounce; Spirits of Nitric Ether (Sweet Spirits of Nitre), ½ a drachm to 2 drachms; Tar-water, ¼ to ½ a pint; Turpentine, 5 drops to ½ a drachm; Gin; Common and Chalybeate Waters, &c. Among the wild plants possessing diuretic properties, the Broom and Dandelion may be mentioned as the most common, and therefore accessible to persons in this country. (For a full account of the former, see *Dandelion*; of the latter, *Genista*). Gin, Spirits of Nitre, and Turpentine, may always be readily procured, and are as certain in their operation as any; but they should not be taken where there is much tendency to irritation. Infusion of raw coffee berries also acts on the urinary secretions, as does any strong mental emotion, such as joy, fear, &c., and nervous affections, such as hysteria; after bleeding, too, and the action of purgatives, there will frequently be an increased flow of urine.

Divarication (Latin *divarico*, to straddle). Applied to the bifurcation or forked division of a vein or artery, &c.

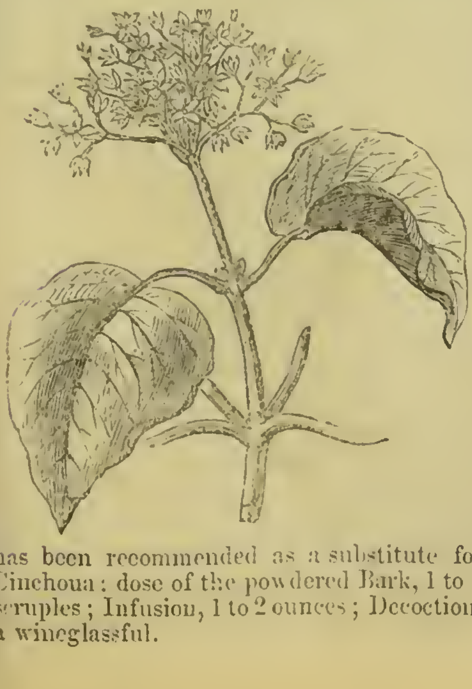
Diverticulum Nuckii. The opening through which the round ligament of the uterus passes.

Dodder. The *Cuscuta Europæa*, a native parasitic plant, sometimes used in visceral obstructions, and intermittent fevers.



Dogbane. The *Apocynum Androsæmifolium*, a plant of the natural order *Apocyneæ;* most of the species contained in which are poisonous. The above is very rarely used: the powdered root, in doses of 30 grains, forms a powerful emetic.

Dogwood. A plant whose scientific name is *Cornus Circinnata*, the bark of which has been recommended as a substitute for Cinchona: dose of the powdered Bark, 1 to 3 scruples; Infusion, 1 to 2 ounces; Decoction, a wineglassful.



Dog Rose (Latin *Rosa Canina*). Sometimes called *Cynosbatum.* The ripe berries are termed Heps or Hips, and are used for making a confection (*Confectio Rosæ Caninæ*) which is chiefly valuable for the formation of pill masses, and as a vehicle for other medicines; it has been sometimes given as an astringent in diarrhœa and dysentery.

Dolichus Pruriens (see *Cowhage*). The stiff hairs of the pods of this plant to which it owes its virulent properties are called *Dolichi Pubes.*

Dorema Ammoniacum (Greek *dorema*, a gift). See *Ammoniacum.*

Dorstema Contrayerva. See *Contrayerva.*

Dorsum (Latin the *Back*). Hence comes the term *Dorsal*, appertaining to the back, applied to a region, ligaments, arteries, &c. The designation of the back of the neck is *Dorso Cervical*: see *Back.*

Dose (Greek *dosis*, from *didomi*, to give). A determinate quantity of anything given or administered at the time, generally applied to medicine; the rule with regard to which is, that the doses of most medicines must be diminished in proportion to the age, thus:—Age 1 to 2 months, 1-15th to 1-24th of a full dose; 6 months, 1-8th; 12 months, 1-5th; 2 years, 1-4th; 5 years, 3-8ths; 8 years, 1-half; 12 years, 5-8ths; 16 years, 3-4ths; 20 years, 7-8ths; 25 to 40 years, full dose; 50 years, 7-8ths; 65 years, 3-4ths; 80 years and upwards, 5-8ths. About 1-4th less should be given to adult women than men; other circumstances, such as individual temperament, constitution, habits, &c., must be taken into account. It must also be borne in mind that the above rule will not apply to all medicines—that, while Calomel, and many purgatives, can be taken in larger doses by children than adults, Opium, on the contrary, affects the young more powerfully, even when given according to the above rate of reduction, and must therefore be diminished considerably below it. See *Apothecaries' Weights, Prescriptions.*

Douche (French). The affusion of water from a considerable height. Dr. Lee, in his *Baths of England*, says "Douches are of various kinds—the *ascending*, the *lateral*, and the *descending*—the water in the first kind falling from a reservoir, at a greater or lesser height, upon the patient in a single or divided stream, the size of which may be varied according to circumstances. The lateral Douche is produced by a man pressing the water through a tube, as with a fire-engine, the stream being directed against the body that is indicated. The strength of this can be regulated by the attendant's pumping with a greater or less degree of force, and also by a finger placed over the aperture, by which the stream is divided. In the ascending Douche the column of water is directed upwards, and is usually taken in a sitting position; this Douche is almost exclusively employed in complaints of the organs within the pelvis." Douches are directly exciting remedies, and are mostly used to produce a greater degree of vitality and activity in parts, as in cases of local debility, scrofulous swelling, muscular rigidity, paralysis, contracted joints, neuralgic pains, &c. They are mostly administered while the patient is in the bath, and are often advantageously combined with friction. The employment of the Douche requires to be carefully superintended. See *Bathing*, *Hydropathy*.

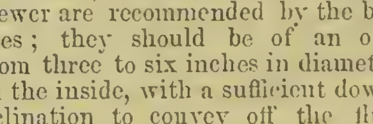
Dover's Powder. This is the Compound Ipecacuanha Powder of the Pharmacopœia, it is composed of Ipecacuanha, Opium, and Sulphate of Potash, in the proportion of 1 drachm of each of the first and second ingredients, to 1 ounce of the last; it is a good diaphoretic, and is much used in rheumatism, dropsy, gout, fevers, dysentery, diabetes, &c. The dose is from 5 grains to 20, taken generally at bedtime. See *Diaphoretics*.

Dragantia. A mucilage obtained from *Gum Tragacanth*, (which see).

Dragon's Blood (Latin *Sanguis Draconis*). A brittle, dark red-coloured resin, which comes from the East Indies, and is the product of the *Pterocarpus Draco* and *Dracœna Draco;* it contains a small proportion of benzoic acid, but is not much used except as a colouring ingredient. A precipitate, formed by mixing cold water with a concentrated solution of this gum, is termed *Dracine*.

Drainage. As, in a sanatory point of view, this is one of the most important of subjects, we make no scruple about introducing it here. "The most prolific source of disease in towns," says Mr. Grainger in his pamphlet published by the Health of Towns Association, "is, certainly, defective drainage and sewerage;" and Mr. Guthrie, when examined before the Sanatory Commission said, "My attention has been more especially directed to private drainage, or the sewerage of individual tenements; for I am satisfied the public health is more deleteriously influenced by the exhalations which arise from pent-up matter in them, than by those which issue from the great main or common sewer." This being the case it behoves all who value health, (and who does not?) to look well to the drainage of their own particular habitations, and to that of the locality in which they reside. Medical practitioners well know that not only are peculiar types of disease set up by the bad state of the atmosphere arising from defective or deficient drainage, but that all diseases occurring in badly-drained localities, are more difficult of treatment; indeed, there is a general deterioration in the public health, a loss of vigour and stamina in the constitutions of those who are constantly inhaling poisonous gases, which renders them less able to resist the attacks of disease, or to recover from the effects of any shock or strain which the system may have to bear. Thus, in badly drained districts, recovery from child-birth will be more slow and protracted; cuts and wounds more difficult to heal; fevers will be more prevalent and virulent, strumous affections more general and obstinate, and all the ills to which the flesh is heir more rife and formidable than elsewhere. Well may it therefore be said—Look to your drainage; see that your cesspools are well constructed, and that the matter in them is not allowed to accumulate too much, nor the exhalations from them to escape where it is likely to enter into the composition of the atmosphere breathed by human beings. For house drains, circular tubes to run into a main sewer are recommended by the best authorities; they should be of an oval shape, from three to six inches in diameter, glazed in the inside, with a sufficient downward inclination to convey off the fluid which passes into them; gratings and gutters are only placed where absolutely necessary to carry off surface water, and these should be trapped. All water closets and sinks should be so constructed as to allow no effluvia to escape, by means of earthenware soil pans, with syphon pipes (see diagram A), which may now be fitted at a trifling cost. Where a sink cannot be had, a funnel-shaped pipe with a cover (B), fitted

A



into the floor, and communicating with a drain, is the best substitute. In calling the attention of our readers to this most important subject, we have but performed a public duty; into the whole subject of drainage it would be manifestly impossible for us to enter, and we therefore refer those who may desire further information upon it to the excellent publications of the Health of Towns Association, which are cheap and easily accessible. See *Air*, *Infection*, *&c.*

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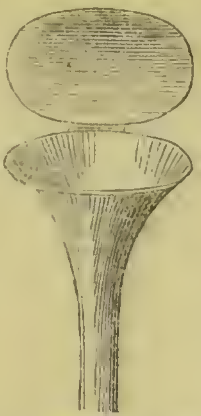


Drastics (Greek *drao*, to effect). Purgatives which are powerful in their operation, Croton Oil, Elaterum, Jalap, and Scammony are those which are principally used. See *Cathartics*.

Draught (Latin *haustus*), a liquid form of medicine, differing from a mixture only in quantity, which should not exceed an ounce and a half, or a wineglassful; it is taken at once, or as we say at a draught; the most familiar form of this is perhaps the Black draught, which may be thus prepared: On 1 ounce of Sulphate of Magnesia, 1 drachm of Senna leaves, and the same of grated Ginger, pour half a pint of boiling water, let it stand until cool, and strain, it will yield sufficient for four draughts; it may be made more aromatic by the addition of a Clove or two, a small piece of Spanish Liquorice will greatly assist to disguise the nauseous taste of the salts.

Dreaming. Is the occupation of the mind during sleep by a series of thoughts, or train of ideas; or a wakeful and active condition of some of the faculties of the mind, while others are perfectly dormant. In a psychological, or to speak more plainly, a mental point of view, this is an extremely interesting subject; but we have only here to do with it as far as the body is concerned. Of the great influence exercised by the body, in its several states and conditions, over the mind, we need no stronger proof, than is afforded by the phenomena of dreams, the cause of which may be commonly traced to some functional derangement or other; thus, from indigestion comes nightmare, and all who have had anything to do with children know full well that disturbing dreams are common indications of disorder of the bowels and stomach; so organic disease, such as that of the heart, or anything which causes oppression at the chest, will frequently give rise to incubus, and visions of a distressing character, as also will a blister, or aught which occasions painful and uneasy sensations of the body. When children are much given to dreaming, they are generally troubled with worms, or some visceral obstruction; and one or two smart purgatives will often relieve the symptoms. When dreaming is the result of great mental labour, or excitement during the day, a temporary relaxation, with more physical exertion may be recommended, and the use of the shower bath; sea bathing, or anything which will divert the thoughts, and brace and energize the system. See *Sleep*.

Dress. It is desirable that we should say a few words here upon the important subject of clothing, than which nothing is more intimately connected with health; especially is it necessary in this variable climate to protect the body by proper coverings, alike from excess of cold and heat, but more particularly the former, and childhood is the period of life in which the greatest attention should be paid to this, because at that time the seeds of diseases are often sown, which render painful, if they do not shorten, the after existence. It is thought by many persons best to bring up children hardy, and to this end they are doused and washed in cold water, all the winter through, and their tender chests, and arms, and legs are exposed, to all the inclemencies of the weather! If they are really strong children, they may survive this treatment, and become robust men and women in spite of it, not because of it; we have seen the failure of so many experiments of this kind, that we are quite convinced that the system is a pernicious one; we are not living in a state of nature now, but a highly artificial state, and we cannot safely bring up our children as savages would theirs. Look at the North American Indian, say the advocates of this system, how tall and straight he is, how supple his limbs, how agile and graceful his motions, he fears neither heat nor cold—you don't hear him wheezing, and coughing, and panting, at every little exertion; how easily he climbs into the highest trees, and dives far beneath the surface of his sea-like lakes and stately rivers; what hunger and fatigue he endures. True, but you see here only the finest specimen of the race: he was enabled to endure the rough treatment to which he was subjected in childhood; but you see not, you know not of, the number of weakly children who have not been able to endure this treatment, but have died in consequence of it, even if they have not been killed by their parents, or left to perish uncared for, because they gave no promise of the necessary strength and stamina to go through the preparatory training for a forest life. But the truth is, we are not North American Indians, neither are we woad-stained, skin-clad Britons; we have passed the state of rude barbarism, and got into one of civilization and refinement: we don't want to kill off our weakly and rickety children even; because, apart from all considerations of the immortal souls within them, we believe that they may grow up very useful members of society, even if they possess less than the usual share of health and bodily strength; so we do not, generally speaking, subject them to the hardening process, but carefully clothe and protect them, as much as may be, from malign atmospheric influences; and to this end we cover their little chests with flannel—nothing like that—and keep their feet warm in winter, with lambswool socks, and their hands and wrists with woollen gloves and muffitees; and we put them on good and sufficient head coverings, and body coverings, outer and inner; as many as may be sufficient to prevent their getting chilled by the nipping blast, and wetted by the driving shower, from which, and the dense fogs and vapours, which are so rife with us at certain seasons, we take especial care to guard them. And, although all through the summer we wash, and sponge, and bathe them in cold water, yet in the early spring, and late in the autumn, and certainly in the winter, we think it best just to take the chill off the water in which their ablutions are performed, and not send them abroad at morning, nor to bed at night shaking and quaking; for we know that all this soon tends to coughing and sneezing, hollow eyes, and sunken cheeks, and perchance *an early grave.* Would we bring up our children effeminately then? by no means, we would have them neither savages nor Sybarites, and we think that the mode of treatment here indicated, more likely than any other to render them as strong and healthy as their original constitutions, and the existing causes of disease to which they are necessarily subjected, will allow them to be. Much, very much, might be said about dress, considered in a sanatory point of view; it may vary greatly in form and material, as the fashions vary, but a general principle should be kept in view throughout all its mutations. There are certain parts of the human body that should never be exposed to the danger of a sudden chill; we may mention the cavities of the chest and abdomen, as especially to be guarded; the low dresses worn in ball rooms and theatres are not simply indelicate, they are extremely dangerous; the fair wearers are so frequently exposed to draughts, and cold currents of air, in leaving the scene of festivity, or passing from room to room, that they are very likely to contract pulmonary diseases; there is danger, too, in the preposterous skirts kept out by means of hoops, at present worn, unless the under clothing be warm, and close-fitting; but without any profane attempt to penetrate into such a sacred mystery as this, let us hope that it is so. We cannot leave the subject of dress without alluding to *tight lacing*, although under that head, and *stays*, we shall have a future opportunity of animadverting upon it. When the old sculptor embodied his ideal of female beauty and perfection of form in the Medicean Venus, he had no thought, that in future ages, the fair daughters of Eve would become so enamoured of distortion, as to compress their waists to half the natural size, forgetting that by so doing they prevented the proper working of the delicate machinery within. The country women of Praxiteles did not so run counter to nature's laws, and we tell our countrywomen, of this enlightened nineteenth century, that to slit their noses, and lengthen the lobes of their ears, like certain wild tribes of the far-away islands, would be no more unreasonable, and far less prejudicial to health, than is this custom of girding in the waist until a woman looks like a wasp.

Generally speaking, children in this country are not sufficiently protected from the weather; very frequently they wear no flannel under garments, which are of more consequence than outer coverings; for this reason it is we have so much croup, inflammation of the lungs, and scrofula amongst us; the neck and throat is insufficiently guarded most commonly in persons of all ages, and this exposure is a principal source of bronchial affections: it remains to be seen whether the practice, now prevalent with men, of allowing the beard and whiskers to remain uncut, will tend to diminish this class of diseases; we are inclined to think that it will.

Dressing of Wounds, &c. As this subject will be more fully entered upon under the special heads of *Wounds*, *Cuts*, &c. (which see), we need here only lay down a few general principles in relation to the most approved methods of dressing, which, although at one time very formidable and complicated, have of late become very much simplified. No person can be a good dresser who has not a firm and light hand, and a large stock of patience. The parts which require his aid are usually extremely sensitive, and the patient probably weak and irritable; the process, therefore, should be conducted throughout with great caution and tenderness. All the necessary preparations and apparatus should be within reach, and in good working order, so that the part need not remain exposed longer than is necessary. The usual requirements are some strapping plaister, cut up into strips of the necessary breadth and length; some lint, bandage, sponge, and warm water; a pair of sharp, curved scissors, and of forceps like these here represented, a piece of caustic in a quill; a probe, and, indeed, all the instruments usually found in a surgeon's pocket-case. The old bandage should be first carefully unwound, and the lint or rags removed, if any should be on; then dip the sponge in the warm water, and sqeeze it out over the part, to moisten the plaister thereon, which will most likely have become hard and adherent. When this is done sufficiently, take the forceps, and with the tips of them turn up the plaister at the outer edges, and, beginning there, slowly and carefully lift the pieces, so that the centre cut, or wound itself, is the last place from which they will come away. There is often much difficulty in effecting the entire removal of this, and recourse must be had again and again to the wet sponge. When the whole of the dressing is away, and the part cleansed, apply the caustic, or whatever may be necessary; then the fresh plaister or suitable dressing; and then bandage up, wetting first the lower part of the bandage, and afterwards, should there be much inflammation, saturate the whole dressing with plain water, or lotion, as may be required. The plain-water dressing alone is that which is now very commonly used. It consists of a piece of linen rag, or lint, folded several times, and dipped in cold or tepid water; place it over the affected part, and cover it with a piece of oiled silk, or other waterproof material, to prevent rapid evaporation; the rag must be moistened afresh as often as it gets at all dry. This is a much more cleanly and, generally speaking, a more effectual application than ointment or other greasy material, and is recommended alike by its simplicity and cheapness.

Drinks. Fluids taken for the purpose of quenching thirst, or to gratify a particular taste, or an inclination for stimulants, or to answer some sanatory purpose, are, as our readers well know, so called: they may be *simple* as water, which is, no doubt, the natural drink of man, and all which, in a perfect state of health, he really requires—*medicated*, as mineral, alkaline, and acidulated waters, either natural or artificial; *nutrient*, as milk, barley and toast water, &c.; or *stimulant*, as tea, coffee, and alcoholic drinks. It is impossible, however, to make a strict classification of them, as many drinks might be placed under two or three of the above heads—some wines and malt liquors, for instance, are taken both on account of their stimulant properties, and as medicines; tea and coffee are also, to a certain extent nutrients, especially when they contain much milk and sugar; and this is the case with all beverages into which the saccharine principle enters, as it, of course, does largely into the *Eau sucre*, to which the French, are so partial. More upon this subject will be found under the heads of *Aqua*, *Ale* and *Beer*, *Beverages*, *Diluents*, *Coffee*, *Tea*, &c.

Dripping. The fat which exudes from meat in the process of cooking is so called; it is useful for a variety of household purposes, often entering into the composition of piecrust, and pastry in general: some persons like it spread upon bread, and those who have good digestive powers may take it in moderation without injury, if not with advantage. We should, perhaps, not have noticed it here, but that we would warn our readers against pouring it when very hot, or remelting it, in newly-glazed earthern vessels, or those which have copper in their composition; as, in the former case, the lead glaze, and, in the latter, the more poisonous mineral, is, to a certain extent, soluble in the fatty matter, and symptoms of poisoning have been induced by partaking of dripping so prepared.

Drivelling or **Slavering.** An involuntary flow of saliva, common in infancy and old age, and also in some other states of weakness and imbecility; it proceeds from a want of command over the muscles of deglutition. There is no remedy for it, except strengthening the system as much as possible with good nourishing food, and in case of sickness, endeavouring to remove the cause from which the debility proceeds.

Drops (Latin *guttæ*). A form in which powerful medicines are often prescribed; when the corresponding quantity is measured *minims* is the term applied. See *Apothecaries' Measure*.

Dropsy (Latin *hydrops*, from the Greek *udor*, water, and *ops*, the look or aspect). This not uncommon form of disease is an effusion into the cellular tissue, or any of the natural cavities of the body. When the epithet encysted is added, it signifies a collection of serous fluid in a cell, of which the ovarium is usually the seat. The medical profession distinguish Dropsy by several names, according to its several stages, or to the parts affected by it; thus, before the disease is fully developed, it is termed *Cachexy;* when the lymph or watery fluid is accumulated in the cellular membrane it is *Anasarca;* when the accumulation is in the abdomen, it is *Ascites;* when in the chest *Hydrothorax;* when in the head, *Hydrocephalus;* when in the womb, *Hydrops Uteri;* when in the scrotum, *Hydrocele.* There are many predisposing and exciting *causes* of Dropsy, among which may be named hereditary tendency, phlegmatic temperament, scanty secretion of urine, excessive discharges of any kind, or suppression of customary evacuations, exposure to a moist atmosphere, the striking in of eruptive disease, taking indigestible food, excessive drinking of watery fluids, or of spirituous liquors; certain forms of inflammatory, eruptive, and other disease, such as scarlet fever, jaundice, diarrhœa, dysentery, consumption, gout, chronic intermittents, all of which cause increased effusion, or diminished absorption, or both united. There are also many local affections which are likely to produce Dropsy, but on these we need not dwell, nor can we, in a work like the present, do more than indicate the general *Symptoms* and *Treatment*, leaving it to the professional adviser to investigate the peculiarities of individual cases, and prescribe the appropriate remedies. In Dropsy generally, then, we observe, there is in the first place, a swelling of the feet and ankles, especially towards evening; this tendency to increase in size gradually creeps upwards, affecting first the thighs, and then the whole of the body; the cheeks and eyelids become puffy and swollen; the eyes lose their lustre, the skin becomes sallow, water often oozes through the pores of the cuticle, or raises it in the form of small blisters; there is a torpid heaviness, frequently a troublesome cough, costiveness, insatiable thirst; the flow of urine is irregular—sometimes small in quantity and high-coloured, depositing a reddish sediment, and then again lighter-coloured and more copious, but nearly always thick or cloudy; there is want of rest, burning fever, and general langour and debility.

The *Treatment* consists in evacuating the collected fluid by scarifications, blisters, friction, emetics, and nauseating medicines, Tartarized Antimony and Squills being the most effectual. Diuretics, such as the Acetate and Supertartrate of Potash, Cantharides, Colchicum, Digitalis, Spirits of Juniper, and Nitric Ether, Broom, Horseradish, Mustard Seed, &c. Diaphoretics, such as Dover's Powder, Antimonials, Camphor, assisted by tepid diluents; the vapour bath, and water impregnated with the Muriated Tincture of Iron; Mercury also should be administered, in small doses, repeated until they just affect the mouth; bandages round the abdomen and legs; a light nourishing diet, with pungent aromatic vegetables, such as cresses, garlic, mustard, onions, &c. regular exercise, cold bathing, and tonics such as Cascarilla, Cusparia, Quassia, Quinine, and preparations of Steel. Such is an outline of the treatment of Dropsical patients, but it is very seldom that a cure can be effected; it comes to tapping at last, and this has to be repeated as often as the fluid collects in such quantity as to render it necessary. We are here speaking of confirmed Dropsy in adults; that which affects children after the measles, scarlet fever, &c., is generally curable if the proper measures are adopted.

Drowning. As this is an accident of not unfrequent occurrence, and is moreover one in which prompt means are of the utmost consequence, it is desirable that we should enter somewhat fully into the mode of treatment to be adopted, in the event of no professional help being obtainable. And first, let us explain what drowning really is, for although most persons are aware that it is, as the dictionaries have it, "suffocation by immersion under water," yet few, perhaps, are aware of the exact process by which the grim destroyer, Death, accomplishes his end in this particular case; and to understand this will greatly assist the intelligent reader in his application of remedial means.

When any warm-blooded animal is immersed in fluid so that the lungs cannot obtain the supply of oxygen from the air which is necessary to render the blood fit for the purposes of life, the result must be a cessation of the vital functions—a suspension, temporary or permanent, of all the operations of existence; this state is called *Asphyxia* (which see.) The first effort of a drowning person is to breathe; a forcible expiration of air takes place, which contracts the lungs, and an attempt at respiration immediately follows, but this is rendered impossible by the interposing water; again the effort is repeated, and a few bubbles of the air thrown out rise to the surface, but none returns to supply its place; the blood is passed back to the heart of a dark colour, being loaded with carbon; sensibility and the power of voluntary motion begins to diminish, and quite ceases directly the arterial blood has lost its bright red colour, and become wholly venous. It is calculated that about one minute and a-half of total submersion is sufficient to affect this change, and to extinguish animal life. But by prompt and vigorous measures, it has been found possible to restore suspended animation, because the organic functions go on for a considerable time after apparent death, which is not real until those functions have wholly ceased; thus it is often with persons in a trance, or state of coma, exhibiting no signs of animation for a time, and yet eventually recovering the entire use of their limbs and faculties. The struggles of a drowning person, although undoubtedly violent, can be of but short duration; if unable to swim, and the fall into the water is from any height, he goes at once to the bottom, unless it is in very deep water; but, going down with inflated lungs, and a considerable quantity of air in his clothes, he soon rises again although he does not probably get his head far enough above water to inhale much air, in the hurried gulp which he is permitted to make before he sinks again; he will probably come to the surface, or near it, a second, and a third time, but will, at last, sink to rise no more, until his body, by the gases generated in it by the process of decomposition, is rendered lighter than the surrounding fluid, and so rises and floats a swollen and bloated corpse. In the violent efforts at inspiration which are made, some water must be swallowed, but not anything like the quantity that is generally supposed, little or none of it gets into the lungs or stomach. There is always some of it, mixed with frothy mucus, and sometimes with blood, in the trachea and bronchial passages, and this gives rise to the supposition that the body is full of water; to get rid of which it was once the barbarous custom to suspend drowned persons by the heels, a sure method of preventing a restoration from a state of asphyxia. The irritation of the glottis, excited by the unsuccessful efforts to breathe, and the rush of water directly the mouth is opened, especially if it be salt water, is so great, as to cause a strong cough, which expels the fluid, and when animation is altogether suspended, the passage is closed. It is generally agreed by the best authorities that, after four minutes of total immersion, there is little chance of restoring a drowned person to life, however instantaneously, actively, and judiciously the necessary means may be employed. There are, indeed, well-authenticated cases on record of recovery after five, six, ten, and even fourteen minutes immersion; but these are rare exceptions, and it may well be doubted whether, in these cases, the immersion was total and uninterrupted. Still it is but to give the patient the benefit of this doubt, and make a prompt and persevering effort to restore him to life, although he may have been in the water much longer than even the longest of the above-named periods; it is possible that he might have been able, by swimming, or taking hold of some floating substance, to keep his head above water for a time, or to obtain a partial supply of air by lifting it occasionally. External warmth, artificial respiration, friction, and electricity are the four great agents to be employed in the recovery of drowned persons: let the body as soon as possible—everything depending on promptitude and energy—be removed to some convenient place, the warmer the better, wrapped in blankets, and laid out on the floor, or a bedstead, which being somewhat raised, will give greater facility for the necessary operations; of course to strip off the wet clothes will have been the first of these; this should be done as soon as possible after the body is taken out of the water, and, if its removal to any distance is necessary, care should be taken to keep the head and shoulders well up, neither allowing the former to hang down backwards, nor to fall forwards on the chest. The patient then being placed on his back, with the fore part of the body raised by means of an inclined board, or pillows, the first care should be to free the mouth and nostrils of all obstructions, next, to apply warmth to any available part of the body; hot bran, salt, or sand to the extremities; hot flannel to the chest, abdomen, and sides, with stimulant liniments and plenty of friction; Camphorated Oil, Olive Oil with Brandy or Turpentine, or Spirits of Hartshorn, make the best liniments, and they should be rubbed on warm with flannel; then, too, efforts should be made to bring the respiratory system into play; not according to the old method, by thrusting bellows up the nostrils, or into the mouth, and so filling the stomach with wind, but by alternate pressure and relaxation of the ribs and parts adjacent, so as to imitate the motion caused by breathing. Electric shocks, slight at first, and gradually increasing in intensity, should also be passed through the upper portion of the spine and the chest, supposing the appliances are at hand for doing this; these are, however, but subsidiary means—external warmth and friction are mainly to be relied on, and these should be persevered in for several hours if necessary; strong smelling Salts, Hartshorn or Liquor of Ammonia, may from time to time be applied to the nostrils, and a stimulant clyster be thrown up the anus, consisting of warm gruel with a table spoonful of Spirit of Turpentine, or double the quantity of Brandy. As long as unconsciousness continues, no efforts must be made to introduce anything by the mouth, but as soon as there is a natural action of the lungs, and heart, a perciptible pulse, and other symptoms of returning consciousness, a tablespoonful of Brandy, with about the same quantity of hot water, should be given, and this dose repeated every half-hour or so, until the patient is sufficiently recovered; he may then be placed in a warm bed, wrapped well in blankets, with hot applications to the feet if they still remain cold, and kept quiet for a time; he will most likely sink into a slumber, more or less disturbed, according as his brain and nervous system are able to shake off the effect of the violent shock which they have received. We should have mentioned above that a warm water or vapour bath, if either can be had, are very useful auxiliaries in such a case. As an incitement to long-continued exertion, we may mention that the recovery of a drowned person has been effected after a perseverance in the necessary means for four, six, and even eight hours. After recovery, it is likely there may be considerable congestion of blood about the brain which will require cupping or bleeding, but that must be left to the judgment of the medical man. If stimulants are considered necessary they must be given with great caution, and there must be an avoidance of all undue excitement; the diet should be nourishing but easily degestible: *quiet* is the great desideratum.

Drowsiness. The unusual tendency to sleep, which is so called, may be symptomatic of congestion of the brain, of typhus or other fevers affecting the head, of threatened epilepsy, of excess of bile, or of general debility. Old persons are commonly drowsy, and will pass the greater part of their time in sleep, unless there be some active disease which pains or annoys them. It is generally desirable to let them sleep on, and take the prolonged rest which their infirmities require. But with the young and vigorous it is different; this symptom should be regarded with suspicion and alarm, and an inquiry instituted into its probable cause. (See the diseases above enumerated, *Rest* and *Sleep*).

Drugs. This term is generally applied to the commercial products employed as medicines in the crude or natural state, the vendors of which are termed *Druggists.* These substances vary greatly in price and quality, and it requires an accurate knowledge—only to be acquired by close observation and long experience—to distinguish which are the better kinds, and to detect the sophistications to which they are subjected. (For more on this head see *Adulterations*, and the several articles included under the term *Drugs*).

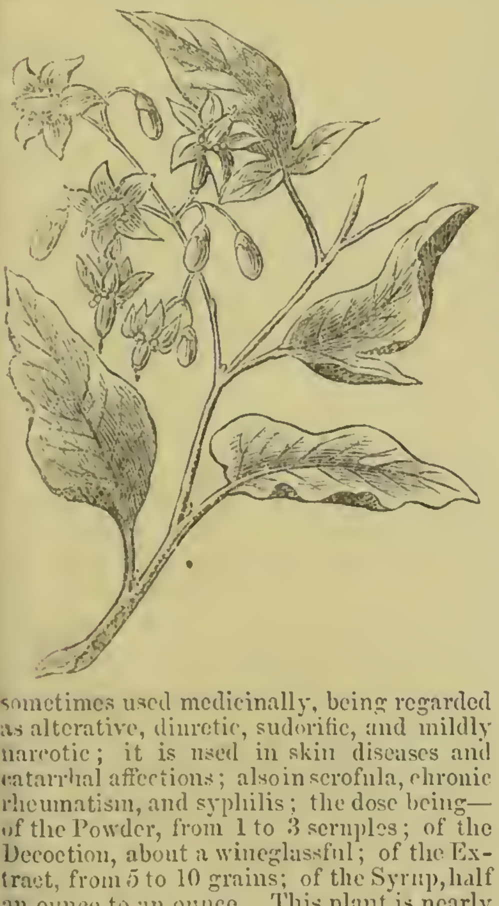
Drum of the Ear. This is the inner portion of the organ of hearing, which contains the small bones, and across which is stretched the other membranes, by means of which sounds are transmitted to the brain. See *Ear*, *Tympanum*.

Drunkenness. Of this great-prevailing vice of the people of our own, and some other countries—this fruitful source of misery and ruin—more will be said under the heads of *Intemperance* and *Intoxication.*

Dry Cupping. The application of exhausted glasses to any part to which it is desirable to draw the humours of the body, and to relieve the seat of disease near at hand. In this process the scarificator is not used; therefore, no openings are made for the escape of the fluid; hence the term dry. See *Cupping*.

Ductus (Latin *duco*, to lead). A duct or passage by which anything is led or conducted, applied here to a tube through which any fluid of the animal body passes, as *D. hepaticus*, the main channel, so to speak, formed by the union of the smaller ducts of the liver; *D. cisticus*, the duct which passes from the neck of the gall bladder into the above-named; *D. communis choledochus*, the bile duct formed by the junction of the cystic and hepatic; *D. pancreaticus*, the pancreatic duct which joins the gall duct at its entrance into the duodenum; *D. arteriosus*, a tube which, in the fœtus, joins the pulmonary artery with the aorta; *D. venosus*, a branch which, in the fœtus, joins the left *Vena hepatica* with the umbilical vein; *D. nasal*, or *lachrymal*, a duct continued from the lachrymal sac and opening into the nose; *D. incisorium*, a continuation of the *Foramen incisorius* between the palatine processes into the nose; *D. thoracicus*, the great trunk formed by the junction of the absorbent vessels; *D. ejaculatorius*, a trunk within the prostrate gland opening into the urethra; *D. of Sterno*, the excretory duct of the parotid gland; *D. of Wharton*, the excretory duct of the sub-maxiliary gland, (these two last, with the sub-lingual, constitute the salivary ducts); *D. of Bellini*, the orifices of the uriniferous canals of the kidneys.

DULCAMARA (Latin *dulcis*, sweet; and *amarus*, bitter). The Woody Nightshade or Bitter Sweet, the *Solanum Dulcamara* of botanists, belonging to the natural order *Solanaceæ*, the dried twigs of which are sometimes used medicinally, being regarded as alterative, diuretic, sudorific, and mildly narcotic; it is used in skin diseases and catarrhal affections; also in scrofula, chronic rheumatism, and syphilis; the dose being—of the Powder, from 1 to 3 scruples; of the Decoction, about a wineglassful; of the Extract, from 5 to 10 grains; of the Syrup, half an ounce to an ounce. This plant is nearly allied to the potatoe, which it very closely resembles in the odour of its root. It grows wild with us in roadside hedges, and especially affects those near ponds or streams of water; its twining stems often reach to the height of five or six feet; its purple and yellow blossoms and bright scarlet berries closely resemble those of the deadly Nightshade; and children are said to have been poisoned by eating the berries; as have grown persons from an overdose of the decoction of the fresh twigs, which, in the country, are still extensively used. There are, however, many safer and better remedies. We give a cut of the plant for comparison with that of its more poisonous relative. (See *Atropa*.) For making the decoction, the twigs should be gathered whenever as thick as a goose-quill; 1 ounce of them, chopped up, to be boiled in a pint and a-half of water, until reduced to half the quantity.



DULCEDO SPUTORUM. A name given to that form of *Ptyalism* (which see), in which the spittle has a sweet or mawkish taste; it is more commonly known as *Sweet Spittle.*

DUMBNESS. Want of power to utter or articulate sounds, proceeding either from some defect in the organs of speech themselves, or the nerves in obedience to which they move and act. Dumbness is very commonly the effect of complete deafness, dating from birth, or from so early a period of life that the powers of speech have never been exercised, and are therefore perfectly useless to the possessor. See *Speaking*, *Speech*.

DUODENUM (Latin *duodeni*, twelve). The twelve-inch intestine, or that portion of the small intestines which is immediately connected with the stomach. See *Alimentary Canal.*

DURA MATER (Latin for hard mother). This is the outer membrane of the brain, so called because it was formerly supposed to give origin to all the other membranes of the body; it is firm, white, and fibrous, being attached to the interior of the skull, between it and which, however, extends the fine arachnoid membrane which lines the dura mater, and also covers the brain, forming a kind of double sac, enclosing a watery fluid. The inner surface of the dura mater forms several folds, which are named—1st, *Falx Cerebri*, between the two hemispheres of the brain; 2nd, *Tentorium Cerebelli*, which separates the cerebrum from the cerebellum; and 3rd, the *Falx Cerebelli*, which passes between the lobes of the cerebellum. The sinuses of the dura mater are eleven in number; we need not give their names; they are the channels or hollows through which pass the larger veins of the *Brain* (which see).

DUTCH DROPS. This popular nostrum, which was at one time largely imported from Holland, and is still so to some extent, is understood to have for its basis the residue of the redistillation of oil of turpentine: it is now chiefly made in this country, according to several formulas. The following is as simple and easy as any, and perhaps approaches as nearly as any to the genuine Dutch form :—Oil of Turpentine and Spirit of Nitric Ether, of each 2 ounces; Tincture of Guaiacum, 1 ounce; Oil of Amber and Cloves, of each ½ drachm—a teaspoonful of which three times a-day. It is a good diuretic and stomachic, and is useful in rheumatism and dropsy. As an outward application to cuts we cannot recommend it, although it is much used for this purpose.

Dys. A Greek adverb, signifying with difficulty. From this root come the names of several important diseases, such as—

Dysæsthesia. Impaired feeling or perception. See *Æsthesia.*

Dyscatopsia. Difficulty of swallowing liquids; a term sometimes applied to *Hydrophobia* (which see.)

Dyschroa. A discoloured state of the *Skin* (which see).

Dyscinesia. Imperfect motion, which may proceed from various causes, such as *Paralysis* (which see).

Dyscrasia. A morbid state of the constitution, arising from some vitiatory or imperfect assimilation of the blood.

Dysecœa. Impaired hearing (which see), sometimes called *Cophosis.*

Dysentery (Greek *entera*, the bowels). Inflammation of the mucous membrane of the large intestines, causing frequent evacuations of a peculiarly fœtid matter, consisting of a large proportion of mucus, generally more or less mixed with blood. *Flux*, or *Bloody Flux*, according as the discharges are free from, or deeply tinged with, the sanguineous fluid, are common names for this disease, which some French writers term *Colite.*

The *causes* of the inflammatory action may be a specific contagion; great moisture in the atmosphere succeeded by sudden heat; putrid or otherwise unwholesome food; noxious vapours and exhalations; ulceration of the colon, resulting in spasmodic constriction.

The usual *symptoms* are cold shiverings and other febrile signs; there may be at the outset unusual costiveness, with flatulency, severe griping and frequent inclination to go to stool: then comes loss of appetite, nausea, and vomiting, an increase of the febrile heat, copious evacuations as above described, which reduce the strength, and cause great emaciation.

The proper *treatment* will be first with regard to the accompanying fever; if it be of the inflammatory kind, and the patient can bear it, there must be blood-letting, antiphlogistic medicines, and low diet; but very commonly the fever assumes a putrid character, in which case it must be treated as *Typhus* (which see). If it becomes *intermittent*, tonics must be resorted to as prescribed under that head. (See *Fevers.)* With more immediate reference to the disease itself, the seat of which is the intestines, an emetic, consisting of 20 grains of Ipecacuanha Powder and 1 grain of Tartarized Antimony, followed by copious drinks of warm water, should be given, and as soon as the vomiting ceases, a powder, composed of 1 scruple of Powdered Rhubarb and 2 grains of Calomel, or a full dose of Castor Oil, or some refrigerent cathartic, such as Epsom, or Glauber's, or Cheltenham Salts. Ipecacuanha alone, in doses not sufficiently large to produce vomiting, say 5 grains, frequently given, often acts well as a cathartic in Dysentery. After this administer emollient glysters about three times a day, with Laudanum about a drachm in every third one, or glysters of Mutton-broth and Arrowroot. For drinks, which should be cold, or nearly so, give solutions of Gum Arabic, or Milk, decoctions of Linseed, Salop, or Barley, or thin Arrowroot. If these do not stop the flux in 24 hours or so, try the following mixture:—Tincture of Opium and Nitrate of Potash, of each 1 drachm; Antimonial Wine 2 drachms; Mint Water, to make 6 ounces, take a tablespoonful, every two or three hours. When the disease has yet more advanced, and the frequency of the stools appears to proceed chiefly from a weakened and relaxed state of the bowels, tonics and astringents should be given, Arnica, Bark, Calumba, Cascarilla, Catechu, Logwood,* Kino, Quassia, are among the best; Lime Water is also good, and an acidulous mixture composed thus:—Diluted Nitrous Acid 2 drachms, Laudanum ½ drachm, Water 6 ounces; take a sixth part every four hours. This also will be found efficient:—Tincture of Catechu, Confection of Opium, and Aromatic Confection of each, 2 drachms; Cinnamon Water, 6 ounces; take two tablespoonsful every four hours. Where there is much debility, Brandy-and-Water may be given; but neither this nor Laudanum will do for the febrile stages.

Persons residing in warm climates are especially subject to Dysentery; few Europeans who go to the East or West Indies escape it, and frequently among the natives of those countries it becomes very prevalent and fatal; this is especially the case in the rainy season. Those who are recovering from its attacks should be careful to avoid exposure to cold or damp, or any sudden atmospheric changes; to be regular in their mode of living, and to go warmly clothed, as they are very liable to a recurrence of the attack.

DYSMENORRHŒA. Difficult or painful *menstruration* (which see).

DYSODES. Having a bad smell. A term applied by Hippocrates to a disorder of the small intestines, on account of the fœtid odour of the evacuations.

DYSOPIA. Impaired sight (which see) and *Eye*.

DYSOREXIA. Depraved *appetite* (which see).

DYSPEPSIA. *Indigestion* (which see).

DYSPERMATISMUS. Slow or impeded emission of *Semen* (which see), and *Spermatorrhœa*.

DYSPHAGIA. Difficulty of *Swallowing* (which see).

DYSPHONIA. Difficulty of *Speaking* (which see).

DYSPHORIA. Inquietude; a state of anxiety, or nervousness, in which it is impossible to sit still. See *Fidget*.

DYSPNŒA. Difficulty of *Breathing* (which see).

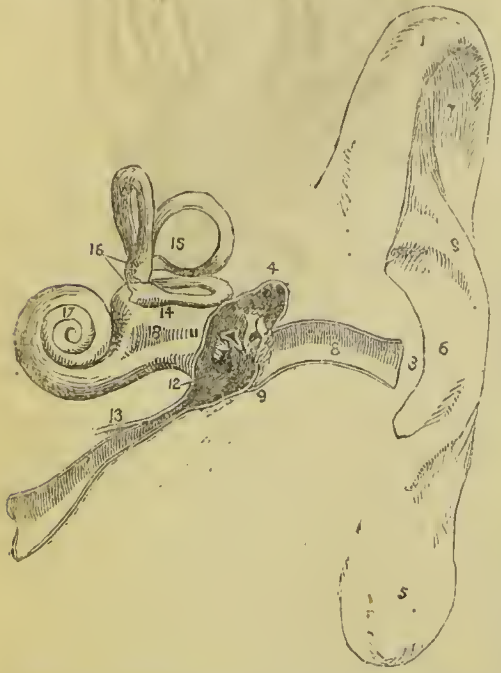
DYSTOCHIA. Difficult *Parturition* (which see).

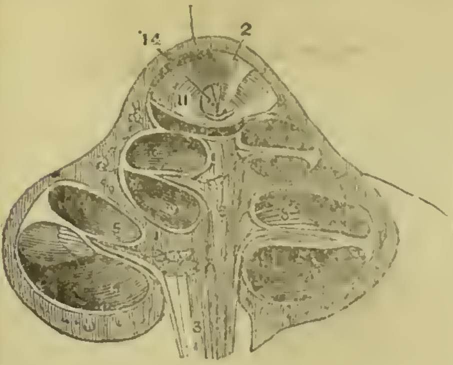
DYSURIA. Suppression of, or difficulty in discharging the *Urine* (which see).

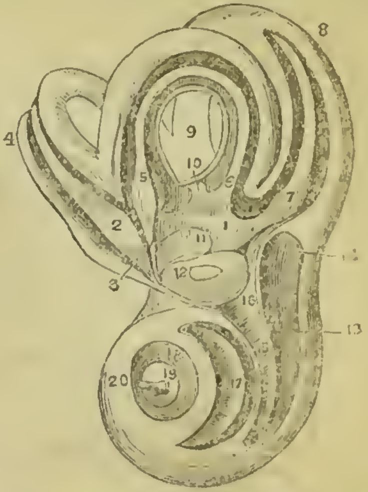
Total suppression is called *Ischura*, partial suppression *Dysuria*, and the aggravated form, in which the urine comes only drop by drop, and with great pain, is termed *Stranguary;* when there is much heat or pain it is *Ardor Urinæ*.

EAR. (Latin, *auris*.) With the general outward shape of the organ of hearing all of our readers are of course familiar, but few are aware what a complicated structure is within—through what winding passages and avenues, carefully guarded from external violence and injury, sounds have to make their way, before they reach the great centre of nervous susceptibility, the brain. Dr. Wilson, in his admirable little work, *The Five Gateways of Knowledge*, makes this inferior to the eye only in point of importance; he says, "What, in ordinary language, we call the ear, is only the outer porch or entrance vestibule of a curious series of intricate winding passages, which, like the lobbies of a great building, lead from the outer air into the inner chambers. Certain of these passages are full of air; others are full of liquid; and thin membranes are stretched like parchment curtains across the corridors at different places, and can be thrown into vibration, or made to tremble, as the head of a drum, or the surface of a tambourine does when struck by a stick or the fingers. Between two of these parchment-like curtains, a chain of very small bones extends, which serves to tighten or relax these membranes, and to communicate vibrations to them. In the innermost place of all, rows of fine threads, called nerves, stretch, like the strings of a piano from the last point to which the tremblings or thrillings reach, and pass inwards to the brain. If these threads or nerves are destroyed, the power of hearing as infallibly departs, as the power to give out sound is lost by a piano or violin whose strings are broken. The eye is a single chamber open to the light, and we can see into it, and observe what happens there. But the ear is many-chambered, and its winding tunnels, traversing the rock-like bones of the skull, are narrow, and hidden from us, as the dungeons of a castle are; like which also they are totally dark. Thus much, however, we know, that it is in the innermost recesses of these unilluminated ivory vaults, that the mind is made conscious of sound. Into these gloomy cells, as into the bright chamber of the eye, the soul is ever passing and asking for news of the world without; and ever and anon, as of old in hidden subterranean caverns where men listened in silence and darkness to the utterance of oracles, reverberations echo along the resounding walls, and responses come to the waiting spirit, whilst the world lifts up its voice and speaks to the soul. The sound is that of a hushed voice, a low but clear whisper; for as it is but a dim shadow of the outer world we see, so it is but a faint echo of the outer world we hear."

Such, then, is the ear, poetically described; let us now attempt to give our readers some idea of its construction, by a more simple, if far less eloquent description. Anatomists make a three-fold division of the parts of this organ, viz., the *external*, the *middle*, and the *internal* portions, and this convenient arrangement it will be best for us to follow. The External Ear is that which is generally called "the ear," being the outward and visible manifestation of that organ; it is figured in the diagram in the fainter lines, and is distinguished by anatomists by the term *Pinna;* its extended hollow form evidently fits it admirably for its intended purpose of collecting the body of sound which is conveyed through the air-passage situated near the centre, of which we shall presently speak. This *pinna* is divided, for anatomical purposes, into the *helix* (1), which forms the external folded margin; *anti-helix* (2), the elevation parallel with and fronting it; the *tragus* (3), that is the pointed process projecting like a valve over the opening of the ear from the face; the *anti-tragus* (4), a tubercle opposite to the last; the *lobulus* (5), being the lower dependent lobe or fleshy portion of the pinna; *concha* or cavity (6); *fossa innominata*, or *scaphoidea* (7), is the name given to the depressed space between the *helix* and *anti-helix*, at the upper extremity of the latter of which is another depression, termed the *fossa triangularis*, or *ovalis*: all the ridges and channels of the outer ear converge into the *concha*, or central hollow which opens directly into the *meatus* (8), an oval tube which conveys the vibrations to the *tympanum* (t) or middle ear, an irregular or bony cavity compressed from without inwards, having for its base the petrous bone; it is bounded externally by the *membrana tympani*, or drum of the ear (9), and the *meatus* (8); internally by the above-named bone; behind by the *mastoid cells* (not seen in the diagram); and throughout the rest of its circumference by the thin bony layer which connects the petrons (stony) with the squamous (scaly) portions of the temporal bones; *malleus* (hammer), *incus* (anvil), and *stapis* (stirrup), are three little bones (10), crossing the area of the tympanum, these are of very singular shapes, as will be seen by this cut, in which they are greatly magnified; they are articulated or joined together, so as to admit of slight motion, and are collectively termed *ossicula auditus*, the little auditory bones; the foot of the last of these named stapis, from its resemblance to a stirrup, blocks up the entrance to what is termed the *fenestra ovalis* of the inner wall of the tympanum, behind which is the *promontory* (11), which divides the above from the *fenestra rotunda*, an opening above the ossicula leading into the mastoid cells, which are numerous, and serve to prolong the vibrations of sound transmitted by the tympanous membrane; the *Eustachian tube* (13), is a canal about an inch and three-quarters in length, extending obliquely from the under surface of the tympani to the throat; the *vestibule* (14) serves to connect the middle with the internal ear, to the latter of which it may be considered as a sort of anti-chamber. This Internal Ear is called the *Labyrinth*, on account of the complexity of its channels of communication; connected with it are three bony passages, or semicircular canals (15), which are horizontal, perpendicular, and oblique as to position, and which, dilating at one extremity, form what we called *ampullæ* (16), below which is the *cochlea* (17), which forms the anterior portion of the labyrinth; (18) marks a depression between the two tubuli, which communicate with the tympanum and vestibules, one of which is called the *scala tympani*, and the other *scala vestibuli*. If our readers will glance again at that part of the diagram marked 17, they will see that the shape of it is very curious, being spiral, or wound upon a centre like a coiled watch spring, or the convolutions of a snail shell, which is the signification of its Latin name *cochlea*, the two scala (thin bony plates or scales) wind through, and divide it into two hollow channels, one terminating by means of an oval in the hinder part of the vestibule, and the other, after becoming somewhat expanded, opening into the tympanum; the following cut exhibits a section of the Cochlea divided parallel with its axis through the centre of the bony







pillar on which the convolutions turn, and which is called the *modiolus* (1), this terminates in a cavity called the *infundibulum* (2), the position of the *cochlear nerve*, which sends its filaments through the modiolus, is marked by the figures 3 3; the two hollows (4 4) are those divided by the scala tympani in the first wind of the cochlea, while 9 9 are those of the second wind or turn; 5 5 and 10 10 are those of the scala vestibuli first and second turns; between 4 and 5 are the *laminæ spiralis*, three plates, forming what is called a *septum*, literally a hedge, a division, and between the layers of this and the other laminæ pass filaments of the cochlear nerve, distributing themselves on the investing membrane, which is thus rendered acutely sensible of the slightest vibration of sound, this nerve forms loops on the laminæ as marked at fig 8; at 11 we see the hollow formed by the remaining half turn of the scala vestibuli, the dome over which is called the *cupola* for an obvious reason; the line leading from this hollow passes into that formed by the half turn of the scala tympani, and the bone which forms its floor curves, spirally round to form a continuation of the infundibulum (2); the line attached to 14 marks the *helicotrema*, or the opening by which the two scala, which throughout their course are perfectly distinct, communicate above. The following cut exhibits the Labyrinth of the left ear, with its cavities and membraneous lining, which although smaller in size, is a perfect counterpart of its bony covering. Fig. 1 is the cavity of the vestibule; 2, the *ampulla* of the perpendicular semicircular canal, which receives a fasciculus, or little bundle from the upper branch of the vestibular nerve, marked 3; 4 indicates the perpendicular canal, with its membraneous enclosure; 5 is the ampulla of the horizontal semicircular canal, 6 is the termination of the membraneous lining of the last-named; 7, th ampulla of the oblique semicircular canal 8, the same canal with its inner membrane; 9 is the common canal formed by the junction of the perpendicular with the oblique and semicircular; 10, the membraneous interior terminating in the *sacculus communis* (common sac or bag); 11 is what is called the *otocinite* of this sac; and 12 is the *sacculus proprius*, situated at the anterior ventricle; 13 is the first turn of the cochlea, the figure pointing to the *scala tympani*, of which 14 marks the extremity passing into *fenestra rotunda;* 15 is the *laminæ spiralis*, and 16 the opening of the *scala vestibuli*, in which the figure is situated, into the *scala vestibuli;* 17 is the second turn of the cochlea, and 18 its remaining half turn; at 19 we have again the laminæ spiralis, terminating in its falciform, or scythe-like extremity, the dark space within which is the *helicotrema;* at 20 we come to the cavity called the *infundibulum*. A comparison of this diagram with the section of the cochlea previously given, will enable our readers to obtain a tolerably clear notion of the internal structure of the Ear. The membraneous lining of the labyrinth is retained in its position by numerous filaments, or threads of nerve, which pass to it through the openings of the inner wall of the vestibule, and the space between the bone and the membrane, is filled with a watery fluid called *aqua labyrinthi;* the *auditory nerve* is spread over the surface, or rather between the folds, of the membrane, and the vibrations communicated by the stapes, or stirrup-bone (already described) and received by the fenestra ovalis, and passed into the fenestra rotunda, whose sole use appears to be to convey the sound throughout the labyrinth.

There are numerous muscles by which the various movements of the ear, both internally, and externally are affected; and nerves and blood-vessels, which it would be useless to particularise here: we may just mention the beautiful arrangement by which the tympanous membrane, or drum of the ear, is always kept in a proper state of tenison; this is effected by two muscles, called respectively the *tensor tympani and laxator tympani*, which have the power of elating or depressing the bone called *malleus* or hammer, the handle of which is attached to the drum throughout its whole length, while its point extends to near the middle: through the Eustachian tube, air from without passes into the cavity, but as this tube opens at the back of the throat, it is out of the direct current of respiration, and so does not admit of cold air, which would be likely to cause inflammation.

EAR-ACHE may proceed from abscess in one or more of the passages, or it may be altogether neuralgic. In children it is not uncommon during the period of dentition, and is especially severe in cutting the permanent teeth; grown persons sometimes suffer from it when producing their wisdom teeth; it is often brought on by exposure to cold or draughts; there is not often much constitutional derangement, although the pain is sometimes excruciating, unless it is long continued.

Treatment.—In children, during dentition, lancing the swollen gums will often afford relief, especially if an aperient be given, such as Rhubarb and Magnesia combined with a little Ginger, as in the Gregory's Powder; elder children may have a little Laudanum dropped into the ear, and take Compound Senna Mixture, repeated until the bowels are freely opened; should these remedies not prove effectual, a fomentation of Camomiles and Poppies should be applied, and a warm poultice afterwards; the heart of a roasted onion applied warm to the external orifice will sometimes afford relief. If the case is very obstinate, two or three leeches behind the ear, followed by a blister, may be tried, with an anodyne saline aperient something like this:—Acetate of Morphine ½ a grain, Solution of Acetate of Ammonia 3 ounces, Sulphate of Magnesia 1 ounce, Water or Camphor Mixture 5 ounces; mix and take two table spoonsful every four hours. When ear-ache is caused by an abscess, and is attended with much swelling and severe pain, hot fomentations and poultices will be the treatment, syringing the external passage with warm water, and, after the abscess has discharged, with a solution of Sulphate of Zinc, in the proportion of 8 grains to the ounce of plain, or Rose water, attention being paid to the bowels. With some persons any derangement of the general health will cause the formation of these abscesses, and in such cases the treatment must be rather general than local. Ear-ache, no doubt, often proceeds from derangement of the digestive organs, and may be relieved by active purgatives and emetics. When it is strictly neuralgic, Quinine, or some preparation of Iron, will be the most appropriate remedy, with stimulating liniments rubbed in behind and about the ear. See *Neuralgia.*

Noises in the Ear like the distant sound of bells, roaring of the sea, hissing, and singing, &c., are often indicative of a determination of blood to the head; with some, mere derangement of the digestive organs will cause these noises; when accompanied by a certain degree of deafness, they are generally occasioned by an accumulation of wax in the external passage, or a partial stoppage of the Eustachian tube by cold. When the noises become chronic, or long continued, bathing the head regularly every morning with cold water will sometimes remove them; if cold be the cause, or disordered stomach, they will pass away with the temporary ailments which occasioned them; if too great a fulness of the veins of the head, cupping, leeching, or abstraction of blood by means of the lancet, with a depletive course of treatment must be adopted.

Polypus of the Ear is by no means an uncommon form of the fungoid growth, which sometimes occurs in several of the internal tissues. It is of a jelly-like consistence, and a whitish yellow colour, and is attached to the membraneous lining of the ear; there are also granulations of fungus which sometimes shoot up from the membrane, and are distinguished by their reddish hue from polypi; these may generally be removed by being hold firmly with a pair of forceps and then gently twisted and pulled at the same time; this should only be done by a properly qualified person, as much mischief may result from the unskilful application of the forceps to so delicate a part; sometimes when the polypus is in the external passage, and not far up, it may be destroyed by astringent applications, such as the Muriated Tincture of Steel, or Burnt Alum, applied with a camel-hair brush.

Wax in the Ear.—When this substance becomes too hard, or accumulates too much, there will be a sense of contraction, with cracking or hissing noises, and generally deafness to a considerable extent; in this case the ear should be syringed with warm soap suds, the instrument used being a proper one for the purpose, holding about 4 ounces, and having but a small tube or pipe which does not fill the whole passage, but allows the escape of tha back water, for catching which a hand-basin should be held close against the neck. As many as a dozen syringefuls may be injected at one time. A strong lotion should be put into the ear-passage over night and kept there by means of cotton wool or wadding; Almond Oil and Laudanum, in the proportion of 2 ounces of the former to 1 of the latter, is a good application in this case, as in many other kinds of Ear disease; it will also frequently stop Ear-ache resulting from cold and other causes.

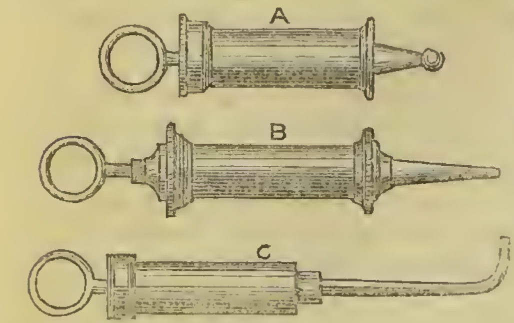
Ear Diseases are not so easily determined as those of many other organs on account of their greater concealment. Delicate and scrofulous children are especially liable to a yellow discharge, which suddenly comes on, and is at first often stained with blood, and accompanied by feverishness and great pain in the parts; there is generally redness and swelling of the passages of the meatus, and inflammation of the surrounding skin. This may arise from an inflamed state of the membrane which lines the passages, or from an abscess formed beneath it, or between the cells of the bones of the mastoid process. The discharge may be caused by some foreign substance thrust into the ear, such as a bead, pea, or piece of slate pencil; in this case great care must be exercised in attempting to remove the foreign body. Very commonly this fills the whole cavity, so that it is difficult to insert any instrument between, and the danger is that it may be pushed so far in, as to press upon the tympanum, causing inflammation and acute pain; sometimes the efforts to effect the removal result in the displacement, and bringing away some of the small bones; while the object whose removal is attempted is probably pushed into a position from whence only an operation will extract it. A pair of fine forceps in the hands of a skilful surgeon will probably effect the desired object, or it may be done by a careful mother or nurse by means of an ear-pick; but it is best for such to have recourse to a syringe and warm water, taking care to throw the water in gently, and leave plenty of room for its return through the orifice of the ear. If these efforts are unsuccessful, it is best to let the foreign body remain for a day or two, it will most likely cause an enlargement of the orifice, and become coated with wax, which will render it less irritating to the membrane, and also facilitate its removal; from time to time the syringing should be continued, and this will no doubt eventually effect the removal. A piece of slate pencil is one of the most frequent, as well as dangerous substances which can be introduced into the ear; as on account of its angular form it is very difficult of extraction, and likely to cause irritation; a pin or a needle is also bad, the latter especially, as it is likely to make its way into the intricate parts, and cause serious temporary, if not permanent, mischief; either of these, however, if their insertion be known of in time, can generally be taken out by means of forceps.

For the purulent discharge from the ear, which is induced by this or any other cause, a lotion made with 2 drachms of Solution of Chlorinated Soda to 6 ounces of Rose, or Elder-flower water, should be injected, but not with any force; the best method is to let it flow into the ear, held so as to receive it fairly, from a small sponge saturated with the lotion.

As children sometimes fancy things have got into the ear when they really have not, it is best to institute an examination before attempting their removal; this may be done by drawing the upper lobe of the ear upwards and backwards, which will have the effect of straightening the curved passage so that the eye can discern the drum at the bottom, unless there is an interposing object

Counter-irritation will sometimes have a good effect on purulent discharges from scrofula or other causes; a small blister behind the ear is the best application, but it should not be kept open for any length of time, or it will weaken the system too much. When the discharge is the result of active inflammation, and is attended by febrile symptoms, a spare diet and aperients must be the treatment; but weakly scrofulous systems require a generous diet and tonic medicines. See *Scrofula*.

Ear Syringe. This instrument may be of brass, pewter, or some other metal; it is generally made to hold 1 or 2 ounces, the latter is the best size to purchase; those marked in the following diagram are the most approved shapes:—A is called Curtis's, and B Abernethy's ear syringe, and C is a self-using instrument, care must be taken not to thrust the point in too far: the globular termination of the first of the above effectually prevents this, and it is therefore perhaps the safest for domestic use; the liquid should be thrown in quite gently, and if it causes great pain should be stopped for a time; a towel or basin must be held close under the ear to receive the return flow.



Ear Trumpets. Vary greatly in shape, and the material of which they are composed; we shall speak more fully of these when we treat of *Deafness* (which see).

Early Rising. As a practice generally conducive to health it behoves us to make this the subject of a short article, the more especially as it is not always the *elixir vitæ* which the proverbialists assume it to be. There are persons so constituted as that to rise and sally forth into the green fields, to climb the grassy hills, and to inhale the pure fresh morning air, before the sun has exerted much power upon the earth, is positively hurtful, and to whom a morning walk, or any active exertion before breakfast, is a sure precursor of a day of listlessness and langour, if it be not head-ache, or serious indisposition. True it is that, as a general rule, the early riser will be stronger and more long-lived than one who lets the earth get well aired before he ventures abroad, and thus those in the enjoyment of vigorous health and a robust constitution will be most likely to preserve those blessings unimpaired by leaving their bed at an early hour, and taking a walk before breakfast; but those who are suffering from any organic diseases, especially such as affect the lungs, or who from any cause have debilitated constitutions, will find but little benefit from the practice; on the contrary, it often accelerates the disease, and yet more weakens the system by such fatigue and exposure to the chill morning air. Do we not recommend early rising? Most assuredly we do to the vigorous and healthy, as well as to those who are not so, if they feel that they can bear it; they must be guided by their feelings: sometimes the "caller air," as our Scottish friends call it, acts as a restorative; very frequently it does so, and most invalids will do well to try it—only let it be remembered that early risers should obey the proverb and go "early to bed," so as not to curtail the hours required for natural rest; if they do this, however much benefit they may for a time appear to receive from their walks, they will eventually find that with them early rising has *not* conduced to permanent *Health* and *Longevity* (which see).

Earth. This is the general term for the minerals which compose the crust of the globe: its claim to admission here rests upon the fact that a number of earths are employed medicinally; these are properly metallic oxides, and they partake to a great extent of the nature of the metals which form their bases; the alkaline earths are those with which we are principally concerned, these are—*Baryta*, from Barium; *Lime*, from Calcium; *Magnesia*, from Magnesium; and *Strontia*, from Strontium: to these we may add *Alumina*, or Clay, from Aluminum, sometimes called Argillaceous Earth; *Glucina*, from Glucinum; *Silica*, from Silicum, which constitutes nearly the whole of flint; *Thorina* from Thorium; *Zirconia*, from Zirconium, which forms the bulk of the gem called Hyacinth. An account of the nature and properties of the first four will be found under their several heads; with the rest and some other earths, which are commercially valuable, we have no concern here.

Earth Baths. Are sometimes used on the Continent as remedies for diseases, but they are very disagreeable ones, and do not seem to possess any peculiar advantages which should entitle them to adoption in this country.

Earwig. It is a popular fallacy that this well-known member of the *Coleoptera*, or beetle tribe, has a fondness for getting into the human ear, and that it sometimes penetrates to the brain and causes madness; if it ever does enter the ear at all, which is questionable, its size would prevent its going far even into the external passage, and farther than this the *membrane tympanus*, or drum of the ear, would effectually bar its progress, as it would that of any other living creature, however small. Newman in his "Grammar of Entomology" says—"It seems highly probable that the original name of this insect was *Ear-wing*, and not *Ear-wig*, which is entirely without meaning;" and we may add, that this name might probably be derived from the shape of the wings, which, when expanded, are much like that of the lobes of the ear.

Eau-de-Cologne (Cologne Water). This

is a preparation of Essential Oils, or the herbs which yield them, containing—like Lavender and other waters (so called) used chiefly as perfumes—a large amount of spirits. It is named after the place where it originated, and from whence is still sent out more than a million of bottles annually, although perhaps not a tenth-part of the water which is sold under the name of Eau-de-Cologne really comes from that city. In the French Pharmacopœia is the following form of preparation:—Take Oils of Bergamot, Citron, and Lemon, of each 3 ounces; Oils of Rosemary, Neroli, and Lavender, each 1½ ounces; Oil of Cinnamon, 6 drachms; Rectified Spirits, 24 pints; Compound Spirit of Balm, 3 pints; Spirit of Rosemary, 2 pints; mix, and after standing a week, distil 24 pints. The following is more simple and easily prepared:—Oils of Bergamot, Lemon, Neroli, Orange Peel, and Rosemary—of each 12 drops; Cardamum Seeds, 1 drachm; Rectified Spirit, 1 pint; mix and put by for use; it improves by keeping. The grateful scent of Eau-de-Cologne, and the delicious coolness produced when it is rubbed over the forehead, or other heated part, and blown upon, have long rendered it a favourite with sick persons; it is also taken internally as a stimulus in nervous debility, and the faintness which frequently overcomes weakly persons, especially in hot weather: from 20 to 30 drops in a little water, or Camphor mixture, may be taken as often as required.

Eau-de-Javelle (French, *eau* water). This is made by passing Chlorine Gas into a solution of 1 pound of Carbonate of Potash in a gallon of water; or, by dissolving 8 ounces of dry Chloride of Lime in 6 pints of water; 16 ounces of Carbonate of Potash in a quart of water, and mixing the two liquids; it is chiefly used as a bleaching liquid, or a disinfectant.

Eau-de-Luce. This is the *Spiritus Ammoniæ Succinatus* of the older Pharmacopœias, being a compound of the Essential Oil of Amber with Volatile Alkali; it was formerly taken as an antispasmodic, and applied externally as a rubefacient. A more agreeable form of preparation is as follows:—Gum Mastic, 2 drachms; dissolve in 9 drachms of Rectified Spirits of Wine, and add 30 drops of Oil of Lavender, 10 of Bergamot, and a pint of strong Water of Ammonia.

Eau-de-Rabel. The composition of this is 1 pint of Sulphuric Acid to 3 of Rectified Spirits of Wine; it is used in France, much diluted, in gonorrhœa, leucorrhœa, &c., but has not obtained favour in this country.

Eau-de-Vie (in Latin *Aqua Vitæ*, meaning Water of Life). A name sometimes applied to Brandy, showing the high estimation in which it is held as a remedial agent.

Ebullition (Latin *ebullio*, to bubble up). The boiling point, being that at which vapour is produced. See *Evaporation*, *Steam*.

Ecchymosis (Greek *ekchyo*, to pour out). That condition of the skin in which the blood is extravasated, or spread from its proper channel over a considerable surface, and appears in livid spots or blotches; this is the case in bruises and in Typhus and some other fevers; it is distinguished by surgeons according to its appearance, as—1st, *Petechiæ*, sigmata or specks; 2nd, *Vibices*, or *Ecchymomata*, patches; and 3rd, Sanguinous discharges. A very common example of Ecchymosis occurs in bruised surfaces, and what are called blood-shot eyes; it is often brought on by violent coughing, or straining of any kind, which causes the vessels to give way, and allows the blood to escape into the surrounding tissues. There is little to be done medicinally; bathing with cold water may be of some service; but, without any such application, in time the absorbents will take up the extravasated blood, and restore the part to its natural appearance.

Ecchymoma Lymphatica is a term sometimes applied to puerperal tumid leg, or *Phlegmatic Dolens*.

Eccritica (Greek *ekkrino*, to strain off). Diseases of the excernent functions.

Eccyesis (Greek *ekkyeo*, to be pregnant). Imperfect fœtation in some organ without the uterus, as in one of the ovaria, the Fallopian tube, or the cavity of the abdomen. See *Pregnancy*.

Eclampsia (Greek *eklampo*, to shine forth). Convulsive motions, especially of the mouth, eyelids, and fingers, so rapid that it is often difficult to follow them.

Ecphyma (Greek *ekphyo*, to spring out). A cutaneous excrescence. See *Caruncle*, *Clavus*, *Verruca*.

Ecphlysis (Greek *exphlyzo*, to bubble up or out). Vesicular eruption, confined in its origin to the surface. The several species of Pompholox, Herpes, Rhypia, and Eczema are comprehended under this term (which compare with *Emphlysis*).

Ecphronia (Greek *ekphron*, out of one's mind). A kind of insanity. We generally understand, by this term, a species of melancholy *Madness* (which see).

Ecpyesis (Greek *ekpyeo*, to suppurate). Applied to the humid kinds of eruptions, such as *Ecthyma*, *Impetigo*, *Porrigo*, and *Scabies* (which see); and for comparison, *Emphyesis*.

Ecstacis (Greek *existamai*, to be out of one's senses). Ecstacy, or *Trance*, (which see).

Ecthyma (Greek *ekthyo*, to break out). A pustular disease of the skin: it is distinguished as—1st, *E. vulgare*, common; *E. infantile*, infantile; 3rd, *E. luridum*, dark coloured; and 4th, *E. cachecticum*, cachectic. See *Skin Diseases.*

Ectoplœ (Greek *ek*, out, and *topos*, a place). A term applied to protrusions of any part, such as occur in hernia, &c.

Ectropium (Greek *ektrepo*, to evert, or turn outwards). Eversion of the eyelids. Compare *Eutropium*, and see *Eye.*

Eczema (Greek *ekzeo*, to boil out). A disease of the skin, which is characterised by the appearance of minute vesicles, which form into thin flakes or crusts; it is distinguished as—1st, *E. solare*, sun heat, or heat spots; 2nd, *E. impetiginodes*, impetigenous humid, or running; and 3rd, *E. rubrum*, or red Eczema was formerly called Erythema Mercuriale, or Mercurial disease, because thought to be produced only by taking Mercury; but it is now known to proceed sometimes from other causes. See *Skin Diseases.*

Education. There is an education of the body as well as of the mind, and it is with the former that, in this work, we have chiefly to do; although, on account of the influence which the mental exercises over the physical, and *vice versa*, the latter must to a certain extent come under our consideration.

Educo, in Latin, means to lead, to conduct, or bring out, or forth, and hence we have this word Education, leading our thoughts to a social, political, and religious question, of deep, nay, awful importance, into all the bearings of which we need not enter. The physical education of children commences at a very early age, as soon, indeed, as they are able to support or do anything for themselves; even then their motions and actions require guidance and direction, and this must be continued with increasing vigilance and care up to a period when the bodily powers are fully matured: the child must be taught to walk aright, as well as to speak correctly; and to exercise the bodily functions, as well as the mental faculties; or it is likely there may be an imperfect development in both cases, or an obliquity of growth, which will seriously affect its future state and destiny. So much has been written and spoken of late upon the laws of health, and physical, as well as mental education, that most of our readers, we apprehend, will be aware at least of the general principles which should guide them in the management of the young. The injunction to "train up a child in the way he should go," may be understood in a double sense, and every conscientious nurse and careful mother will make it her chief study to conduct this training, and discharge the duty imposed upon her, in such a manner as may be most likely to make healthful and vigorous men and women of the children under her charge, and conduce to her own peace of mind. Frequently yet, although not so much as formerly, do we see stunted, deformed, or feeble creatures, who owe their defective stature, their weakness of body, or their spinal or other deformities, to an improper Physical Education, an important part of which consists in the formation of regular habits of eating, drinking, and answering the calls of nature; in personal cleanliness, in proper and moderate exercise, in a due command of passions and inclinations, and strict obedience to the wishes and directions of parents and teachers; for although these latter claims may at first sight seem to have regard rather to moral than physical training, yet, certain it is, that an unruly, headstrong, disobedient child, will seldom make a vigorous, healthful, and long-lived man. If unrestrained by the voice of affection or of authority, he will generally in youth run into wild excesses which will sap the foundations of health, if they be not already undermined by injudicious indulgences in the earlier stages of existence.

We have spoken of exercise as a part of Physical Edreation: this, taken regularly, and sufficiently, is absolutely necessary for a proper development of the muscular and other powers of the body. Much of the time in youth must necessarily be given to study, but there must be play as well as work, walking as well as reading and writing, and talking and laughing as well as puzzling the brains, and crying over sums which will not prove, and lessons which will not remain in the memory. Calisthenics are quite as necessary as caligraphy, and the use of the limbs as that of the globes; therefore, our boys and girls should not be confined too closely to the nusrery and schoolroom, the latter of which they should never enter before the age of six, or, if weakly, before that of seven or eight. Without exercise the muscles of the body, any more than the faculties of the mind, will never be fully developed; nor will the food of which children do, as they ought to, take a large quantity, be properly digested and assimilated, so as to afford the means of building up and filling out the bony framework of the body, and carrying on the various functional operations which are essential to health. Then, again, as no exercise can be beneficial, if the mind is not interested in it, we see how important it is that the mind should be free to take pleasure in the walks and pastimes of youth, and whereas God has connected our mental manipulations with a physical organ, the brain, which is likely to share in the strength or weakness of the body, and to be affected by its ailments: we see, also, how intimately connected are Mental and Physical Education.

Edulcoration (Latin *dulcis*, sweet). The sweetening of any medicinal preparation.

Eel. This fish, esteemed by many a great luxury, is by no means to be recommended, it being very oily, and therefore indigestible. The oil procured from it by roasting is sometimes employed with advantage for rubbing into stiff joints.

Effervescence (Latin *effervesco*, to grow hot). The bubbling or commotion caused in fluids by the rapid escape of vapour or gas: thus boiling is effervescence; but, medically, the term is usually applied to the extrication of carbonic acid gas only; this gas is contained naturally in many mineral waters, and it is produced artificially by an acid and an alkali. In fermented liquids it is generated in the process of fermentation, and they are brisk or vapid, lively or dull, in proportion to the quantity which they contain.

Effervescing Draughts. Are extremely useful in many kinds of sickness: they are particularly so in fevers, when the thirst is great and when there is sore throat and a furred tongue; they appear to cool and refresh the patient, and to exert a sedative effect as well as to remove the thick mucus and other incrustations of the tongue and throat, as they probably do, also, those of the stomach. For the mode of preparing these draughts (see *Beverages*). The patient after taking one should always remain in an upright position for a minute or two, to break off the wind, which with the gas will be pretty sure to be expelled from the stomach. See *Eructation*.

Effluvia (Latin *effluo*, to flow out). Vapours, or gaseous emanations or exhalations from bodies; the term is generally applied to those which are prejudicial to health and are offensive to the sense of *Smell* (which see), also *Contagion*, *Infection*, *Miasma*.

Effusion (Latin *effundo*, to pour out). The escape of a fluid out of its natural vessel or viscus, into the surrounding cavities or tissues; or the secretion of an unnatural quantity of fluid, as of lymph or serum, on any surface. Effusions may take place in the head, the chest, the abdomen, the bronchial passages, the joints, or any part of the cellular tissue; they are generally caused by inflammatory action: when occurring in the brain they cause *Apoplexy*, or *Hydrocephalus* (which see), also *Anasarca*, *Œdema*, *Dropsy*, &c.

Egg (Latin *ovum*). That of the domestic fowl is chiefly used for medical and nutritive purposes, for which it is highly valuable, containing a larger amount of nutrition than perhaps any substance of equal bulk, and being more easy of digestion and assimilation: the white is composed of albumen, with a small proportion of earthy salts, and the yelk, or yolk, has in addition oily matter and sulphur; beaten up with milk, or wine, or some other suitable fluid, it may be taken with great advantage by weak and sickly persons, or boiled just sufficient to set the albumen, but not to make it hard, in which state it is indigestible. If put into boiling water, about 2½ minutes will suffice to cook an ordinary sized egg; if into cold, it will be done almost as soon as the water reaches the boiling point; a little salt should be taken with it, and pepper, if agreeable. Eggs seldom agree with persons whose digestive organs are very weak, or who have a tendency to an over secretion of bile. Under the head of *Beverages* will be found receipts for preparing *Egg-flip* and *Egged Wine*, which are both good cordial restoratives. Custards, and puddings of which eggs form an important ingredient, are generally good for invalids, if not made too rich; we must refer our readers to their cookery books for modes of preparation.

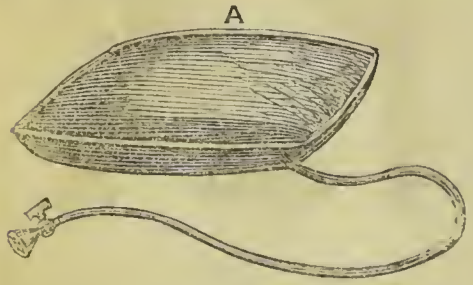
Ejaculatorii (Latin *ejaculo*, to cast out). A pair of muscles surrounding the whole of the bulb of the *urethra* (which see).

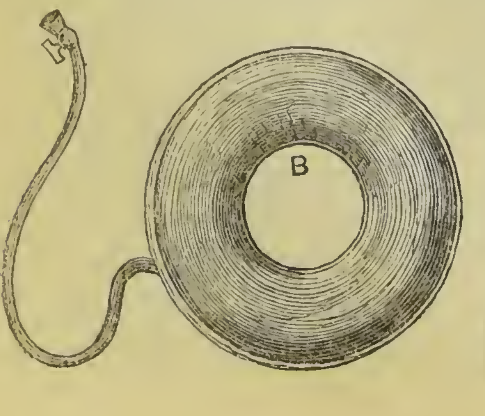
Elæosaccharа (Greek *elaion*, oil, and Latin *saccharum*, sugar). An old term for preparations made by titurating ½ an ounce of Essential Oil, with three times the quantity of powdered White Sugar, and sometimes adding 1 ounce of Magnesia; it is a form of preparation now seldom used. See *Linctus*.

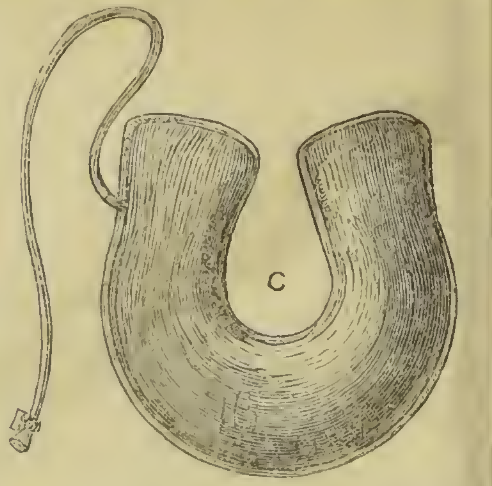
Elain (Greek *elaion*, oil). The more fluid part of one of the proximate principles of fat, and that which with *Stearine* constitutes the fixed oils. From the same root comes *Elaodic Acid*, an acid obtained from Castor Oil, and *Elais Guinensis*, the Guinea Palm, which yields the Palm Oil, and, according to some, the best kind of Palm Wine.

Elastic Gum. See *Caoutchouc*, *Indian Rubber*.

ELASTICITY. This is the property or power which certain bodies possess of returning, when stretched or bent, to their original form and position, as soon as released from the constraint put upon them; steel is elastic, but only in a particular way, because it will only bend, not stretch; but caoutchouc, or Indian rubber, especially when vulcanized, exhibits this property most perfectly, and is therefore applicable to a great variety of purposes, among which, those relating to the treatment of diseases are not the least important; thus we have elastic bandages, belts, stockings, and supports of various kinds, which are more fully described under the heads of the diseases or injuries to the relief of which they are applied. Air and water beds and cushions are also made of this material, and these, by relieving the amount of pressure on wounds, sores, &c., and also by affording counter pressure on the surrounding parts, conduce greatly to the cure and comfort of sick persons. Some of these contrivances we have already described under the head of *Beds*, in which also are given the names of some of the principal inventors and vendors of these useful articles, to whom application can be made by such of our readers as may require them. The following cuts will exhibit the forms and construction of the elastic air cushions manufactured by Mr. Hooper, of Pall Mall, London. A is a cushion for general purposes; B, a circular cushion for sitting on, which may be had with or without the hole in the centre; and C is a horse-shoe shaped cushion, the use of which will be sufficiently obvious.

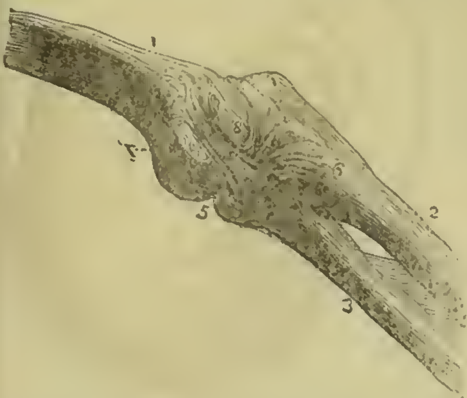






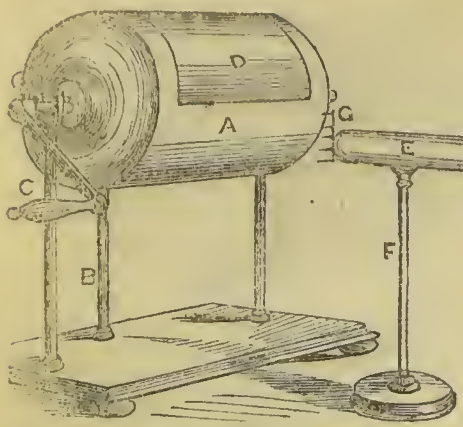
ELATERIUM (Greek *elayo*, to stimulate). This term was applied by Hippocrates to drastic purgatives generally, but its present signification is the active matter which subsides from the juice of the wild, or Squirting Cucumber, a plant of the natural order *Cucurbitaceæ*, whose scientific name is *Ecbalium Elaterium*, or *Momordica Elaterium*. The result of a carefully conducted series of experiments by Dr. Clutterbuck is, that the active principle of this plant resides not in any quantity in the plant, as the old medical writers supposed, but only in the juice round the seeds; and the quantity of this is so small, that only 6 grains could be got from forty Cucumbers. This *elatin*, as Dr. Paris has called it, is violently cathartic; it is sometimes prescribed in obstinate constipation, but most commonly in *Dropsy* (which see); it varies greatly in strength, and should be administered very cautiously, especially to weakly patients, as an over dose acts as an irritant poison. Of the Extract, from $\frac{1}{2}$ to 2 grains; of the Tincture, 60 minims; of the Elatin itself, 1-16th of a grain is a dose; the best form of administration is a pill made with aromatics and bitter extract, such as Gentian. The fresh fruit of the Elaterium is called *Elaterii Pepones*.

ELBOW-JOINT. We have already spoken of the complicated character of this joint, under the head of *dislocations;* we now furnish our readers with a cut, which will enable them to understand the matter more clearly. This presents an external view:—1 is the *humerus*, or upper bone of the arm, 2 the *ulna*, and 3 the *radius*, these two being the lower bones, they are all held together by ligaments connected with both extremities of the bones, and with the shaft; 4 marks the insertion of the external lateral ligament, which passes beneath into the orbicular ligament 5, of which the hinder part (6) is spread out at its insertion into the ulna; 7 marks the situation of the anterior ligament, scarcely seen in this view; and 8 is the posterior ligament, thrown into folds by the extension of the joint; there are other ligaments not shown here, nor are the muscles by which the complicated movements of the joint are affected, these actions are the rotation of the radius (3) upon the ulna (2), that in a forward direction being termed *pronation*, in a backward *supination;* it is a ball and socket joint, and the movements are chiefly limited by the anterior and posterior ligaments, which in great muscular efforts are not unfrequently ruptured, hence *Dislocations* (which see). The actions of the Elbow-joint itself, being that of the humerus in its socket, formed by the coronoid process, may be likened to those of a pump handle up and down; the muscular effort which produces them causes flexion and extension of the ligaments, they are limited behind by the coronoid process, and in front by the olecranon, or head of the ulna.



ELDER (Latin *sambucus*). The bark, leaves, flowers, and berries of the common Elder (*Sambucus Nigra*) of the natural order *Caprifoliaceæ*, are all used medicinally; the first is said to have purgative properties, and has been given in dropsies; the second are boiled down with lard to make an ointment, which is a cool and soothing application for irritable sores; the third are also made into an ointment, which is cooling, healing, and gently stimulating; they are likewise distilled for Elder-flower water, which has an agreeable odour, and is a good menstruum for cooling lotions, cosmetics, &c.; the fourth are diaphoretic and laxative; of their expressed Juice from 2 drachms to ½ an ounce may be given at the time. Of the rind of the inner Bark, powdered, the dose is from 5 to 20 grains; and of the Decoction of the same, made by boiling one ounce of this bark in two pints of water, until it evaporates to 1 pint, the dose is from 2 to 4 ounces.

ELECTRICITY (Greek *elektron*, amber). So called because by rubbing this substance the existence was first discovered of that subtle fluid which appears to be diffused throughout all nature, either in a latent or active state, according to circumstances; we have here only to speak of it as an agent in the treatment of disease, in which of late years electric, galvanic, or magnetic action has been much employed. Before doing this, we may just explain the principle upon which the construction of all electrical machines, and galvanic batteries, are based: in the first case, friction is the agent employed for exciting the latent fluid into activity, and how employed the following diagram will best explain; this is the common Electrical Machine, A is the glass cylinder, the axis of which is supported on a frame, and which is pressed upon by a cushion stuffed with horse-hair, and covered by an amalgam of zinc and mercury spread over its surface; this cushion is attached by a conducting bar (B) of metal, generally iron, connected with the frame, and with it communicating with the table, or the ground on which the machine stands. To one extremity of the axis of the cylinder is attached a handle (C), by which it may be made to revolve rapidly, and by the friction of the cushion against the glass, electricity will be produced upon its surface, to guard which against the moisture of the air, the upper part of the cylinder should be covered with a piece of silk or glazed taffeta (D), falling over in the direction of the rotatory motion, so that it retains its place; E is a long narrow hollow metalic cylinder, supported by a glass rod (F), and having at the extremity a cross bar of metal, set with teeth (G), presented towards the larger cylinder, which, on being turned briskly round, communicates the electricity produced by the friction through the toothed bar to the smaller metal cylinder (E), which being isolated on the glass, non-conducting pillar, retains it until it is brought into contact with some conducting substance, which may be simply the finger of a person, or a metal chain, one end of which is attached to this conductor, and the other held in the hand. This is as simple and clear a description as we can well give of the machine for generating electricity; there are several modifications of it, and of late, glass plates have been used instead of the large cylinder, but in all these the principle is the same. The galvanic batteries are somewhat different, and of these we shall speak under the head of *Galvanism* (which see).



The effect produced upon the system by Electricity is that of a nervous excitant and stimulant; it promotes a freer circulation of the fluids, particularly of the blood, increases animal heat, and all the secretions and excretions of the body. It has been found chiefly useful in deafness, paralysis, head and tooth-ache, indeed all neuralgic pains; to parts affected with cramp, gout, and rheumatism it has often been applied with success, and also to foul and indolent ulcers. In asphyxia from drowning it should always be employed, if the means to obtain the necessary apparatus can be had, although only as an adjunct to other efforts. Electricity should *not* be applied when there is active inflammatory disease; nor when there is a high degree of excitement in the organs of sense, and in those of voluntary motion; or when there is great relaxation and debility in those organs; nor when there is any prevailing local irritation, such as inflammatory tumours, skin eruptions, &c. The electric stimulus in such cases is likely to produce congestion, or a local accumulation of humours: the shocks given may be continuous, or a succession of smaller shocks, but they should always be regulated by the strength of the patient, and never be very violent, or they may cause serious mischief. An electric shock can be as well administered to twenty persons as one; they have only to join hands with him in contact with the conductor, and the fluid will pass through them all. See *Galvanism.*

ELECTRO-PUNCTUATION (Latin, *pungo*, to prick). The operation of inserting two or more needles in a part or organ affected, and then sending a current of electricity through them, by bringing them into connexion with the poles of a machine or battery. See *Electricity.*

ELECTUARY (Latin, *electuarium.*) Any preparation of powdered drugs made up with treacle, honey, or syrup, was formerly so called, but the term is not much employed in medical practice now, it having been superseded by *Confection* (which see). In the London Pharmacopœia, the term is rejected altogether, although those of Dublin and Edinburgh still retain it: and what we now call Electuaries are not the set formula of the colleges, but those extemporaneous prescriptions of a jamlike consistence which the physician sometimes prescribes in certain diseases, thus, as an example, we give the following form of an Electuary for piles:—Take of Cream of Tartar and Powdered Jalap each 2 drachms; Powdered Ginger, 1 drachm; Milk of Sulphur ½ an ounce; Confection of Senna (formerly called Lenative Electuary) 3 drachms; Syrup sufficient to reduce the whole to the proper consistence.

Elecampane (Latin, contracted from *Enula campana*). The root of the *Inula Helenium*, of the natural order *Compositæ*, has a bitter pungent taste, and tonic and expectorant properties; it is used in cases of chronic catarrh, chiefly in combination with other medicines. The dose of the Powder is from 1 to 6 scruples; of the Extract 1 to 3 scruples; of the Decoction about a wineglassful.

Elephantiasis (Greek, *elephas*, an elephant). This disease is a chronic swelling of the leg, which assumes a large misshapen appearance; hence the name. There are two forms of it, distinguished as *E. Arabum* of the Arabians, and *E. Græcorum* of the Greeks: in the West Indies it is sometimes called Barbadoes Leg, also Yam Leg, from its supposed resemblance to that vegetable in shape; the Ceylonese call it *Galle Leg;* and the dwellers in the Indian Peninsula, *Cochin Leg*. The Arabian form is strictly a cutaneous disease, the cause of which does not seem to have been clearly ascertained; the skin of those affected by it becomes rough and tubercular, something like that of an elephant (another reason for the name); the tubercles, which are of various sizes, are of a dusky red, or livid colour, and appear chiefly on the face, ears, extremities, making the person affected by the disease a disgusting object; hence the name *Satyriasis*, like a wild man or satyr. The large misshapen leg no doubt arises from repeated effusion of lymphatic and gelatinous matter in the cellular membrane under the skin, in consequence of inflammation of the lymphatic glands and vessels.

We see but little of this disease in England; it is chiefly confined to hot and imperfectly cultivated countries; such cases as do occur here are chronic, having commenced abroad, and perhaps years ago. But little can be done for them, and only professional treatment is likely to be of any service. See *Skin Diseases*.

Elemi. The resin of the *Amyris Elemifera*, commonly called Gum Elemi; its only medical use is to form the Compound Elemi Ointment (*Unguentum Elemi Comp.*), sometimes employed to keep open issues and setons.

Elevator (Latin, *elevo*, to raise). A name given to certain muscles, on account of their action, and also to an instrument used for raising depressed portions of the *Cranium* (which see), and *Trepanning*.

ELF-SIDENNE (literally elf-squatting). The old Anglo-Saxon name for *Ephialtes*, or *Incubus* (which see).

ELIMINATIVES (Latin, *elimino*, to cast forth). Medicines used to promote the secretions: they may be divided into, 1st, *Sialogogues*, those which act upon the salivary glands; 2nd, *Expectorants*, those which promote the bronchial secretions; 3rd, *Cathartics*, those which cause increased action in the bowels; 4th, *Chologogues*, those which act on the liver; 5th, *Diaphoretics*, those which act on the skin; 6th, *Diuretics*, acting especially on the kidneys. (For fuller particulars of these, see their several heads).

ELIXIR (Arabic, *elikseir*, an essence or pure mass without any dregs). This term was formerly applied to compound tinctures, but is now chiefly confined to one or two preparations, such as the Elixir of Vitriol. or Aromatic Sulphuric Acid; Daffy's Elixir (which see), and Paregoric Elixir, that is, the Compound Tincture of Camphor. We are reminded of the alchemists and empirics of old by such names as the Elixir of Nature, applied to a Compound Tincture of Aloes; the Sacred Elixir, the same with Bhubarb; the Elixir of Health, Tincture of Senna; Stomachic Elixir, Compound Tincture of Gentian; Elixir of Longevity, an Aromatic Tincture with Aloes; and the Anti-Arthritic Elixir, being a mixture of the three Tinctures of Aloes, Guaiacum, and Myrrh.

ELLAGIC ACID. This is a sort of punning name, being a backward reading of the word *Gallæ*, or Galls; it is applied to an acid whose presence has been detected in the process of making *Gallic Acid* (which see), and *Galls*.

ELYTRON (Greek for a sheath). A name for the *Vagina* (which see); hence we have *Elytrocele* (Greek, *kele*, a tumour), vaginal hernia; and *Elytroidis* (Greek, *eidos*, likeness), sheathlike,, a term applied, 1st, to a membrane of the vagina called the *Tunica vaginalis;* 2nd, to a kind of *Pessary* (which see).

ELM. The inner bark of the well-known tree, the *Ulmus Campestris* of botanists, belonging to the *Ulmaceæ*, is slightly astringent, owing that property to the presence of Tannic Acid, of which it contains about three per cent.; it is also thought to be alterative, and is therefore given in chronic rashes, and other cutaneous affections. Its only officinal preparation is the Decoction, prepared by boiling 2½ ounces of the bruised bark in 2 pints of water, until it is half evaporated.

EMACIATION (Latin *emacio*, to make lean) Wasting away. This may be looked upon as rather a symptom than a disease. It has been remarked by Dr. Watson that Emaciation occurs in complaints that are no commonly dangerous—as in dyspepsia, and hypochondriasis, which is often connected with dyspepsia—and when it does occur, i marks the reality of the disease. This wasting happens in many fatal maladies—in pulmonary consumption, for example—and in dropsy, although the dropsical enlargement sometimes masks it. It accompanies many acute diseases, and is reckoned an unfavourable sympton; for it shows tha the body is not properly nourished. Sometimes the Emaciation is so extreme tha the integuments give way, and the bones of the patient are said to come through the skin.

Simple diminution of bulk, it should be observed, is not always Emaciation; the former may be compatible with the appearance, and the reality, of perfect health; bu with the latter there is always a change i he colour of the skin, and an unhealthy appearance altogether.

Emasculation (Latin, *emasculo* to render impotent). Deprivation of the power of propagating the species. See *Castration*, *Testes*.

Embalming (French *embaumer*). The process of preserving dead bodies from putrefaction by filling them with gums and pices; an art much practised by some anient nations, especially the Egyptians. See *Enterment*, *Putrifaction*.

Embrocation (Greek, *embrocho*, to moisten). An external fluid application, generally of an oily or saponaceous nature. See *Liniment*.

Embryo (Greek, *em* in, *bryo* to bud forth). The ovum or germ in the uterus, or womb, s so-called before the fourth month, after which it is termed the *Fœtus*, (which see). From this root we have also *Embryology*, a description of the embryo; *Embryotomy* and *Embryalcia*, the operation of opening the fœtal head in order to effect a deliverance; and *Embryalicus*, a blunt hook or forceps for the performance of this operation. See *Labour*.

Emetic (Greek *emeo* to vomit). A substance capable of exciting vomiting, and this altogether independent of any effort of the stomach arising from quantity or flavour. Susceptibility to the action of this useful class of remedies varies greatly in different ndividuals, and is considerably modified by he nature of the disease for which they may be administered. When there is any morbid affections depending on, or in connexion with, over-distention of the stomach, Emetics are very useful, as the vomiting which they excite generally affords speedy relief; thus n impaired appetite, excess of acidity, inoxication, and poison, they are constantly resorted to, as well as in jaundice arising from obstruction of the biliary ducts; in catarrh, and phthisis, and dysentery, where here is much mucus of which it is desirable to relieve the passages. They are also useful in nauseating doses in dropsies, hæmorrhages, constrictiou, and in any cases n which it is desirable to relax the muscular or other tissues. Emetics are dangerous or hurtful, where there is much debility, as their frequent use lowers the tone of the system; also where there is a determination of blood to the head, especially in patients of plethoric habit, in visceral inflammation, the advanced stages of pregnancy, hernia and prolapsus uteri. An emetic should always be administered in a fluid form, and its operation will be promoted by drinking some tepid diluent, such as warm water, or bitter infusion, such as Camomile Tea.

The principal Emetics given to promote full and free vomiting are, Ipecacuanha Powder, dose 10 grains to 30, with a grain of Tartarized Antimony, of which 2 or 3 grains may be given by itself; Sulphate of Copper, $\frac{1}{4}$ to 5 grains; Vibriolated Copper 1 to 3 grains, Sulphate of Zinc 10 to 30 grains; the latter is perhaps best in cases of poisoning, and it should be repeated every quarter an hour, until the full effect is produced; if neither of the above can be readily obtained, a teasponful of strong Mustard may be mixed in warm water and swallowed, or a tablespoonful of common salt; irritating the fauces with a feather, or putting the finger far down the throat will often excite vomiting; and in cases like hydrophobia, or tetanus, where swallowing is out of the question, it may be excited by the injection of some emetic substance into the veins; the action in this case, however, is slow and somewhat doubtful. It should be borne in mind that mineral act more quickly than vegetable Emetics, and that the action of either will be more rapid in proportion to emptiness of the stomach.

In the chest diseases of Children, where there is much mucus without the power to expectorate, Emetics are especially serviceable, and they may be given frequently; for very young children Ipecacuanha Wine is the best form of administration, from 10 drops to 30 according to age, in a little sweetened water. In some cases of incipient disease, where there is coldness of the skin, and other symptoms of depression, a full dose of Ipecacuanha, with about 6 grains of Carbonate of Ammonia will have the effect of arousing the system. Cramps and spasmodic diseases, are often greatly relieved by Emetics, and asthma when nothing else will afford relief.

Emetin. Is an alkaloid procured from the root of the *Cephælis Ipecacuanha* (which see); and *Emetic Tartar* is the Tartrate of Antimony and Potash; it is more commonly known as *Tartar Emetic* (which see); and *Antimony*.

Emmenagogues (Greek *emmenia*, the menses, and *ago*, to induce). These are medicines which possess the power of promoting the monthly discharge, which is so essential to a state of health in certain conditions of the female system. They may be placed under four distinct heads: 1st. *Stimulating*, as antimonial and mercurial preparations, which are chiefly given to young persons and those who manifest peculiar insensibility of the uterus; 2nd. *Irritant*, as Aloes, Savine, and Spanish flies, most useful in torpid and chlorotic habits; 3rd. *Tonic*, as preparations of Iron, cold baths and exercise, best suited for lax and phlegmatic habits; 4. *Antispasmodic*, as Assafœtida, Castor, and Pediluvia, weak, delicate, and irritable constitutions are those for which these are best adapted.

Some of these medicines appear to act upon the womb by stimulating the surrounding organs; others by their action on the nervous system; and others again by their tonic influence upon the system at large: the first-named action is that of Aloes, the second, Assafœtida, and the third Iron. See *Menstruration.*

The Emmenagogues which are principally used are:—Aloes, 5 to 15 grains; Ammonia (Carbonate and Subcarbonate), dose 5 to 20 grains; Aristolochia, 10 to 30 grains; Cantharides, 1 to 2 grains; Electricity; Ergot of Rye, 5 to 6 grains; Elemi Gum, 10 to 30 grains; Galbanum, 10 to 30 grains; Iron, Rust of, Tartarized, and Vitrolized, 10 to 30 grains; Iron, Sulphate of, 1 to 2 grains; Citrate of, 5 to 10 grains; Madder, ½ a drachm to a drachm; Myrrh, 10 grains to 1 drachm; Opoponax, 10 to 30 grains; Savine, 10 to 30 grains.

EMMENIA (Greek *em* in, and *men*, a mouth). The catamenial discharge. See *Menses.*

EMOLLIENTS (Latin *emollio*, to soften). Medicines which have the power of relaxing and softening the animal fibre when applied to it; such power have heat and moisture, oily and fatty matters, and they exert it without the aid of mechanical action: when employed to obviate the effects of any acrid or stimulating substances, they are called *Demulcents* (which see). Emollients are chiefly useful in the treatment of inflammation, either local or general, in diseases of the urinary organs, and in cases of poisoning by acrid substances. An alleviation of symptoms is all that can be looked for from this class of medicines, which may be arranged thus:—*Humectant*, *Relaxing*, *Lubricating*, and *Atonic* Emollients.—Those most used are:—Almond Emulsion, Expressed Oils, Figs, Common and Marsh Mallows, Mucilages, Liquorice, Lard, Opium, Raisins, Spermaceti, Pediluvia, Warm Water, and Vapour Baths.

EMPHYSEMA (Greek *emphysao*, to inflate). A swelling produced by air diffused in the cellular tissue of the body, it may be by its escape from the lungs or windpipe, in consequence of a wound, or an ulcer of the mouth or nostrils, or of the trachea or larynx, or a rupture of the air-cells, with-
out any external wound, may admit of
escape into the cellular tissue of the lung
and thence to other parts of the body;
there may be a perforation of the walls
the chest, with or without injury to the lu
itself; in all these cases it is termed *Tra*
matic Emphysema; while that which
caused by a development of gas within t
cells, which, when it does occur, is mo
usually a consequence of gangrene, is term
Spontaneous Emphysema. If the inflati
is altogether confined to the lungs, it is di
tinguished as *Pulmonary*, or *Interlobula*
according to the part of the organ which
affected by it; among the *symptoms* of the
last kinds may be mentioned shortness
breath, often very severe, especially aft
exercise, difficulty of breathing, palpitati
of the heart, coldness of the extremities, a
a livid colour in the face and lips, a slig
cough, and scanty expectoration; aft
awhile the legs begin to swell, a proof th
the Emphysema is affecting the whole of t
tissues—becoming, in fact, traumatic.

The *treatment*, in the first case, will be
afford relief when the paroxsyms are on,
means of opiates and anti-spasmodics, su
as the following:—Take of Laudanum,
drachm; Sulphuric Ether, 2 drachms; Ca
phor Mixture, 4 ounces; a fourth part to
given every three hours until relief
afforded. The patient should not lie, b
sit with the shoulders raised, and ha
plenty of fresh air; if the bowels are in
state likely to produce flatulency, carm
native aperients should be administere
When it passes into the traumatic state,
which the peculiar elastic swelling exten
to the legs, arms, and other parts of t
body, the treatment should be much t
same as in *Dropsy* (which see). If it o
ginates in this state, and is caused by
wound, or a fractured rib, in the first case
will be well to enlarge the orifice of t
wound, if it can be done with safety, to pr
vent the valvular action which causes t
retention of the air: in the second, t
bandage which is generally applied for su
a fracture will arrest the further progress
the mischief; should tight bandaging inte
fere with respiration, small punctures shou
be made in the skin with a lancet to all
of the escape of the air; this latter treatme
may be practised all over the surface of t
body where the air has collected, and th
indeed, is all that can be done in many cas
of *Emphysema*, especially those arising fro
spontaneous generation of gas in the *tissu*
(which see).

EMPIRIC (Greek *em* in, and *peira* exper
ment). Formerly applied to one who pra

ticed medicine upon experience, without regard to the rules of science; but now, to a vendor of nostrums. See *Quackery*.

Emplastrum (Greek *emplasso* to spread). The Latin for *Plaisters* (which see).

Emplorosthotonos (Greek *emplorosthen* before, *teino* to draw). Chronic Spasm, which draws the body forwards. See *Spasms*.

Empyema (Greek *en* within, *pyon* pus). A collection of pus in the cavity of the thorax; the term was applied by the ancients to every kind of internal suppuration; that which we so distinguish is the result of chronic *Pleurisy* (which see) and *Lungs*.

Empyreuma (Greek *empyreuo*, to set on fire). A peculiar vapour produced by destructive distillation, to breathe which is injurious; from that of vegetable substances we obtain Empyreumatic Acid and Oil; burnt Hartshorn yields Empyreumatic Alkali. When pastry or other articles of diet are subjected to great heat in a close oven or vessel, they emit an unpleasant effluvia, a proof they have become empyreumatized, and therefore unwholesome. See *Baking*.

Emulge (Latin *emulgeo*, to milk out). A term sometimes applied to medicines which excite the flow of *Bile* (which see).

Emulgents (same root). The arteries and veins of the kidneys, which were formerly supposed to strain or milk out the serum. See *Kidneys*.

Emulsion (same root). A mixture of oil or balsam and water, the particles of which are made to unite by means of mucilage, sugar, yolk of egg, or alkali; the most familiar example of an emulsion which we can give is the common salad dressing; here the oil and egg are first beaten up together, and then vinegar is added to give it the necessary acidity, and reduce it to a creamy consistence; milk is itself a natural emulsion, and is a good vehicle for mixing some gummy or oily substances—such as Camphor, Castor Oil, Turpentine. Several preparations which used to appear as Emulsions in the old Pharmacopœias are now called mixtures. The following is a most agreeable Emulsion for a cough:—Take of Sweet Almonds 1 ounce, blanch them, and rub them down in a mortar, with Powdered Gum Acacia and Lump Sugar of each 2 drachms, add hot water 1 pint, mix and strain through muslin; add Paregoric Elixir 2 drachms. Take a tablespoonful or two occasionally.

Enamel. The exterior surface of the *teeth* (which see). It is composed, according to Berzelius, of Phosphate, Carbonate, and Fluate of Lime, Magnesia, Soda, Membranes and Water, and forms a hard crust over the whole exposed part of the tooth.

Enarthrosis (Greek *en* in, and *arthron* a joint). The ball-and-socket joint, as that of the head of the femur with the hip, and of the humerus with the glinoid cavity of the scapula.

Encanthus (Greek *en*, and *kanthos* the cornea of the eye). A disease of the *caruncula lachrymalis*, of which there are two species, distinguished as *benigna*, or the mild; and *maligna*, the malignant or inveterate. See *Caruncle*, *Eye*.

Enanthesis (Greek *en* within, and *antheo* to blossom). A rash thrown out in *Scarlet Fever*, *Measles*, *Nettle-rash* (which see).

Encephalon (Greek *en*, and *kephale*, the head). A term applied to the parts generally within the skull. See *Brain*.

Encephalitis (same root). Inflammation of the brain, as distinguished from *arachnitis*, or *meningitis*, inflammation of the membranes. From the same root, with *kele* a tumour, we have also *Encephalocele*, hernia of the brain; and from the same again, with *eidos*, likeness, *Encephaloid*, a term applied to a morbid growth resembling the brain in its convolutions, and *Encephalosis*, a cut surface which resembles the brain.

Encysted (Greek *en*, and *kystos*, a cyst). A term applied to tumours which consist of matter contained in a sac or cyst.

The origin of *Encysted Tumours* is somewhat obscure; they commonly occur in the head, and often attain the size of a bantam's egg, having a very unsightly appearance, especially if there is but little hair to hide them. They are tolerably firm, indeed almost cartilaginous in their structure, and are filled with a thick cheesy matter. No medical treatment will reduce their size, and nothing remove them but the knife; the excision is not difficult to effect; it is but to cut freely through the skin and let the contents escape, then tear out the bag, which is attached but slightly to the scalp, or other part. Be careful to remove every portion of it or the tumour will be reproduced. The bleeding is not generally great, as only the smaller superficial vessels are involved in the operation; in the head it is not sufficient to cause serious inconvenience, and at any other part, it is easily stopped; it is best, however, that none but a surgeon should attempt to operate for a tumour of this kind, in any other part than the scalp, for fear of injury to nerves, or some important vessels. See *Tumours*.

Endemic (Greek *en*, and *demos*, a people). Diseases peculiar to the inhabitants of particular districts or countries are so called; they commonly owe their origin to some impurity of the air, arising from the evolution of noxious gases, liberated in the decomposition of vegetable or animal matter. Among the most prevalent kinds may be named *Ague*, which is the chief endemic disease of marshy countries or localities; *Goitre*, Swelled Throat, or Bronchele, prevailing chiefly in the Alps; and the *Plica*, or Plaited Hair of Poland (all of which see). It may be further observed that the word Endemic bears pretty much the same signification in relation to the diseases of a country, that the term indigenous does to its plants.

ENDERMICS (Greek *en* in, and *derma* the skin). Medicines which are applied to the skin, and so act upon the system through the absorbents; of this class are *Iodine* and *Mercury* (which see); they produce the same constitutional effects as when swallowed, but do not so affect the delicate membrane of the stomach, and may therefore be more safely administered in this way, if there is time to await their slower operation, which is frequently not the case. The endermic method of treatment has never been very extensively followed, as it entails considerably more trouble than that of administration by the mouth, and occupies a much longer portion of time; yet many arguments may be used in its favour, and especially in cases where the frequent administration of drugs has impaired the powers of the stomach.

ENDIVE. A garden plant, sometimes used as salad; it is wholesome. The wild endive, *Chicorium intybus*, is used to adulterate ground coffee. See *Chicory*.

ENDOSMOSIS (Greek *endon*, within, and *osmos*, impulsion). The property by which rarer fluids pass through membraneous substances, into a cavity or space containing a denser; when the thinner fluid passes out of the cavity which contains it into a surrounding denser fluid it is called *Exosmosis* (which see). These terms were introduced into scientific nomenclature by the French chemist Dutrochet, who considers that the phenomenon to which they refer is owing to what he calls intercapillary electricity, an opinion grounded partly upon the experiments of his countryman Porret, who found that when two liquids of different levels are separated by a membrane, they may be brought to a level by establishing an electrical current between the two, thus rendering the membrane permeable. M. Poisson, however, has demonstrated that Endosmosis may be the result of capillary attraction, joined to differences in the affinity of heterogeneous substances. But, whatever the principle involved in the phenomenon, the fact remains the same, and it may be exhibited by a very simple experiment, as thus:—Partly fill a small glass tube with coloured syrup or gum water, and tie over the open end a piece of bladder; immerse the end so secured in pure water, and notice the height at which the fluid stands in the tube: in a few hours it will be seen to have risen considerably, by reason of the water which has passed into it by *endosmosis;* now fill the tube with water, tie it over as before, and immerse the end in the denser fluid; instead of rising in the tube it will be found to sink rapidly, and what remains of it will be coloured by the syrup, or mucilage, as the case may be; into the denser fluid it has passed out of its receptacle by *exosmosis*.

Thus it is, as we believe, that the saline or other thin solutions in the stomach pass into the veins, and mingle with the blood, which is considerably thicker than they; and thus it is that some substances which are swallowed may be detected in the urine very shortly afterwards; indeed, it seems likely that the whole theory of absorption, which performs so important a part in the animal economy, may rest to a great extent upon this basis.

ENEMA (Greek *eniemi* to inject). A clyster or glyster, lavement or injection. A formula used for conveying both nourishment and medicines to the stomach under particular morbid circumstances. (For forms of preparation see Glysters: for proper instruments, see *Syringe*.)

ENECIA (Greek *enekes*, continuous). A term applied to continuous action, as in some inflammatory fevers, such as typhus, &c. (See *Fevers*.) These were formerly called *continuentes*, because they were supposed to be unattended by any change or relaxation whatever.

ENNUI. This is a French word, signifying listless fatigue of the mind, more frequently resulting from want of employment of the mental powers, than from the reaction of over exertion. Those affected by *ennui* are generally the idle and thoughtless; and no better cure for the disease, for such in some cases it really is, can be recommended than active useful employment. We say to persons who are thus afflicted—Why stand ye thus idle when there is so much work to be done? Why waste the precious time which God has given for your own benefit, and that of your fellow-creatures? Do something that shall be useful and beneficial to yourself, if not to others; although the latter ought to be a great aim and object of your existence. Industry like virtue is its own reward; it conduces to health both of mind and body, but idleness consumes both, as rust does metal, and one of the most obvious signs of this wasting of the mental powers is *ennui*.

Ens (Greek meaning literally any being or existence). Applied in chemistry to a substance supposed to contain all the qualities or virtues of its ingredients: hence we find in old medical works *Ens Martis* or *Ens Veneris*, formerly called Martial Flowers, now Ammoniated Iron (*Ferrum Ammoniatum*). This is a Muriate of Ammonia and Iron.

Ensiform (Latin *ensis* a sword). The xiphoid or sword like cartilage of the *Sternum* (which see).

Entasis (Greek *entaso* to stretch). A term denoting extension or stretching, applied to constrictive spasm, including *Cramp*, *Wry-neck*, *Locked-jaw* (which see).

Entera (Greek for the bowels, from *entos* within). A term applied to the intestines; hence we have also *Enteric* belonging to, and *Enteritis*, inflammation of the intestines, that is of their serous coat; this may be either chronic or acute, and should be distinguished from inflammation of the peritoneum, called *Peritonitis*, (which see). A very common name for the above disease is Inflammation of the Bowels, but as the symptoms vary considerably, according as the part attacked is the large or small intestines, so must the mode of treatment. When the duodenum is alone the seat of disorder, we have impeded digestion, resulting in constipation and sickness; when there is general inflammation of the small intestines, there is also constipation with usually severe pain and fever; and when the lower or larger intestines are the seat of mischief, we have very frequently diarrhœa and dysentery: as subsidary symptoms we may mention, in the first case, pain after eating, slight vomiting, a small quick pulse and arid dry tongue, with sometimes the appearance of jaundice; in the second, arid and shining tongue, great thirst, tenderness on pressure, and flatulent swelling of the part affected, with small and frequent pulse, and loathing of food, but no vomiting, sometimes also loose bowels, but more generally the reverse; in the third we have most, if not all of the dysenteric symptoms, and the treatment must be according thereto. When the whole of the intestines are affected, we have usually the severe form of disease, called by some *Gastro-enteritis*, that is *Bilious* or *Gastric Fever*. See *Bile*, *Fevers*.

Enterocele (Greek *entos*, and *kele* a tumour). A Hernia, the contents of which are intestine, and

Entero-Epiplocele (same root with *Epiploon, omentum*). A Hernia, the contents of which are both intestine and omentum; see *Hernia*.

Enteroraphia (Greek *entos*, and *raphe* a suture). A cleft in the divided edges of an intestine.

Enterolithus (Greek *entero*, the intestine, and *lithos*, a stone). An intestinal concretion. See *Calculus*.

Entozoa (Greek *entos* within, and *zoe* life). Intestinal *Worms* (which see).

Entropium (Greek *en* and *trepo* to turn.) Inversion of the eyelids, causing the lashes to rub against the eyeball; the reverse of this, in which the inside of the lid is exposed, is called *Extropium* (which see) and *Eye*.

Enuresis (Greek *en*, and *oyreo* to make water). Incontinence of *Urine* (which see).

Epanetus (Greek *epaniemi*, to remit). A term sometimes applied to remittent fevers, whether of the mild, the malignant, or hectic form. See *Fevers*.

Ephelis (Greek *epi*, upon or for, and *elios*, the sun). Dark freckles on the skin, which only appear in hot weather. See *Sunburn*.

Ephemera (Greek *epi* and *emerha*). A fever which runs its course in twelve hours. See *Fevers*.

Ephialtes (Greek *epi*, and *allocai* to leap). *Incubus* or *Nightmare* (which see).

Ephidrosis (Greek *epi*, and *idroo*, to perspire). Profuse and morbid perspiration, (which see).

Ephippium (Greek *epi*, and *ippos*, a horse). A saddle. A part of the *os sphenoides*, so called from its saddle-like shape. See *Skull*.

Epium. A term denoting a raspberry, and applied on the American coast to *Frambœsia* (which see). On the African coast this disease is called *Yaws* (which also see).

Epicranium (Greek *epi*, and *kranion*, the skull). Applied to the integuments and epineurotic expansion which lie over the *Cranium* (which see) and *Skull*.

Epidemic (Greek *epi*, and *demos*, the people). Diseases which prevail among a large portion of the people of a country; rage for a time more or less long, and then gradually diminish and finally disappear, to return again at periods more or less remote. The most familiar example of this class of diseases is, perhaps, *Influenza* (which see).

This appears to be more independent of endemic, or local causes, than most others of its class. Cholera is also an epidemic disease, coming we know not where, and going we know not whither, truly "the pestilence which walketh in darkness;" although there is no doubt that its development is greatly favoured by an impure state of the atmosphere, and other local circumstances which have for it a peculiar attraction. *Scarlet Fever*, *Measles*, *Small Pox*, and several other eruptive forms of disease are also, to a certain extent, epidemic, although they are disseminated by contagious influences, which have been well ascertained to be more potent and speedy in their operations under certain circumstances: poverty, and dirt, and vicious indulgences, render persons especially liable to their attacks, and although the reason of their visitations to particular places cannot always be discovered, yet it is well known that the coming of the greater and more pestilential epidemics, has generally been preceded or accompanied by striking meteorological vicissitudes, such as great extremes of heat and cold, drought and moisture; so it was in olden times with the visitations of plague, now happily unknown amongst us, and so it has been of late years with Asiatic cholera, the first extensive diffusion of which can be traced to a swampy district at the mouth of the Ganges, after a very wet season.

Not always are epidemic influences confined to man, the lower animals suffer from them, and it has even been observed that birds have forsaken districts in which these influences have prevailed.

Thanks to the spread of cultivation, which has greatly cleared the lands of decayed vegetable matter, and dried the swamps, and to improved sanatory arrangements in our towns, we know little or nothing of those frightful epidemics, which spread terror and devastation through wide districts—such as the Plague at Athens, 430 years before Christ; the Black Death, or Plague, of our own country in the fourteenth century; the Sweating Sickness of the fifteenth; the Great Plague of London in the seventeenth. No cry of "Bring out your dead!" now sounds dolefully in our streets; nor does the fatal red cross, marked upon the door, indicate that the inhabitants of that house are smitten by the Angel of Destruction, and cut off from all communication with their affrighted fellow citizens. The Plague of eastern countries, of Egypt especially, does not visit our shores; true, we have had Cholera from the Orient, and its visitations have been very fatal, but nothing to the plagues and pestilences of former times, and of some countries at the present day. The few and comparatively harmless visitations which we do have, should be as warnings to us. Let us cleanse our streets and houses, and keep our highways clear of decomposing matter; let our rivers flow fresh, and free, and sweet, and pure; make them not receptacles for all the filth and offal of crowded cities, or we may expect, and shall surely have fatal epidemics amongst us again, to lay low alike the young and the old, and send the voice of lamentation through the land, as on former occasions of national sorrow and humiliation. See *Pestilence*, *Plague*.

Epidermis (Greek *epi*, and *derma* the skin). The cuticle or scarf skin; see *Cuticle*, *Skin*.

Epididymus (Greek *epi*, and *didymoi* two). The small oblong body which lies along the *Testes* (which see).

Epigastrium (Greek *epi* and *gastro* the stomach). The upper part of the *Abdomen*, (which see), and *Stomach*.

Epiglottis (Greek *epi* and *glottis*). A cartilage of the larynx situated above the *Glottis* (which see).

Epilepsy (Greek *epi* and *lambano* to seize). This, which belongs to the class of convulsive diseases, is one of the most terrible which can affect mankind. It comes on at irregular periods, and the attack is for the most part sudden, and without any warning; the patient may be about his ordinary occupation, or talking cheerfully with his friends, who are perhaps startled by a loud and fearful cry; a convulsive spasm passes over the face, which is drawn on one side, the lower part of it being turned to one shoulder, the eyes are set and staring, or rolling wildly in the head, the colour of the skin becomes dark and livid, and the veins swollen and turgid, there is frothing at the mouth, and a kind of choking noise in the throat; all control over the limbs is lost, and the body falls to the ground unless supported. Sometimes the arms are thrown about at random, while the fingers clutch at whatever comes in their way, digging the nails deeply into it, if a soft substance; the tongue is bitten through by the teeth, and the struggle, as against some invisible enemy, is frightful to look upon. After a shorter or longer period, the convulsive movements gradually diminish, and the patient seems to recover a faint glimmering of consciousness, but the look which he casts around is stupid and heavy, and he goes off into a lethargic sleep, from which he does not awake for some hours; even when he does, his mental perceptions appear to be very much blunted, and it may be days before he fully recovers from the effects of the attack. This is a severe form of Epilepsy; it constantly occurs in milder forms, and is sometimes so light as to cause only a temporary inconvenience. We have said that there is no warning of the attack; but this should be understood to apply to lookers on; for the patient is generally aware when one is impending, by certain symptoms, which, after the occurrence of one or two paroxysms, he knows how to distinguish. These symptoms vary, according to constitution and temperament; they may be lowness of spirits, with unusual irritability, diminution or increase of energy, dizziness, noises in the ear, specks floating before the eyes; but the most marked symptom is called the "epileptic aura," a kind of creeping sensation, felt first at the extremity of a limb, and then gradually extending over the whole body, and into the head.

EPINYCTUS (Greek *epi*, and *nyktos*, night). A pustular eruption, so called, because it was first supposed only to appear in the night, an impression, probably produced by its being then most troublesome. When the term is now used, it is applied to *Ecthyma*, (which see), and *Skin Diseases*.

EPIPHORA (Greek *epi*, and *phero*, to carry with force). A flux of tears, causing what is termed a watery eye; it arises from an abundant secretion, and not, as is the case, in *stillicidium lacrymarum*, from an obstacle to the absorption and conveyance of the tears from the *lacus lacrymarum* into the sac. See *Eye*.

EPIPHYSIS (Greek *epi*, and *phyo*, to grow). A process of a bone, attached by cartilage. Compare *Apophysis*.

EPIPLOCELE (Greek *epi-ploon*, omentum, and *kele*, a tumour.) Hernia of the *Omentum*, (which see) and *Rupture*.

EPIPLOON (Greek *epi*, and *pleo*, to sail). The omentum; so called from its lying loosely or floating upon the intestines.

EPIPLOSCHEOCELE (Greek *epiploon*, *oscheon*, the scrotum, and *kele*). A Hernia in which the omentum descends into the scrotum. See *Hernia*.

EPISCHESIS (Greek *epi*, and *iseho*, to restrain). Obstruction or suppression of excrement. See *Constipation*.

EPISPADIUS (Greek *epi*, and *spao*, to draw). A kind of malformation, in which the urethra opens in the dorsum of the *Penis*, (which see) and *Hypospodias*.

EPISPASTICS (Greek *epi*, and *spao*, to draw). This is a term applied to whatever application has the power of producing a discharge of serum or pus, by exciting a previous active inflammation or suppuration; it consequently includes blisters, issues, and setons, but is most commonly restricted to the first of these; (which see) also, *Rubefacients*, which are but a milder kind.

EPISTAXIS (Greek *epi*, and *staxis*, a dropping). A term sometimes applied to *Bleeding at the Nose* (which see).

EPITHELIUM (Greek *epi*, and *tithemi*, to place). The cuticle on the prolabium, or red part of the lips, and on the mucous membranes in general; it is the same as the epidermis on the more exposed parts of the body.

EPITHEM (same root). A lotion or other external application. There is now an Epithem Company established for the exclusive preparation and sale of an article called *Piline* (which see), by means of which fomentations, lotions, poultices, &c., can be applied to any part, in a very clean and convenient manner. This *Spongea*, or *Impermeable Piline*, may be obtained of any druggist, with directions for use.

EPSOM SALTS. This is the old *Sal Catharticus Amara*—Bitter Carthartic Salt. It was formerly prepared by evaporating the mineral waters of Epsom; but modern science having shown its nature and composition, a much easier and cheaper mode of preparation came into play; its more correct name, Sulphate of Magnesia, indicates pretty clearly that it is a compound of Magnesia and Sulphuric Acid. It is, perhaps, the most generally used of all known purgatives—certainly of all those of a saline nature; yet considerable mischief undoubtedly results from its common and indiscriminate use; for, although it is well suited for persons of a full plethoric habit, and is a most valuable medicine in many diseases—being tolerably certain in its action, griping but little, if at all, and producing free, watery discharges—yet it is too weakening to be taken frequently by those of delicate constitutions, and especially when swallowed as it most commonly is, in the form of a strong solution. The flavour being very nauseous, it is the great object with those who are necessitated to take it, to make the dose of liquid as small as possible; but in this they greatly err; in too concentrated a form it induces a discharge of the serous, or watery partion of the blood, into the bowels, and thus seriously debilitates the system, besides causing a tendency to constipation, directly its action has ceased. From ½ a drachm to 1 drachm of these salts, dissolved in a tumbler of water and so taken, would have a better effect, and be safer in its operation, than five or six times the quantity in a wineglassful of the liquid; the drink is not pleasant, but it may be taken, and the best time is before breakfast in the morning. To correct any tendency to griping or flatulency, it is best to add something warm and aromatic; the following is a good form of preparation: Take of Epsom Salts, 1 ounce; sliced Ginger Root, 2 drachms; a few bruised Cloves; add boiling Water, 1 pint; let it stand two hours, then strain into a wine bottle, and fill up with Peppermint Water. Dose—a tumblerfull every morning fasting, while required. Persons suffering from habitual constipation, will commonly find relief from this remedy, which, however, is scarcely fit for the weak and aged, for the reasons already stated. By persons of scrofulous and sclerotic habits, Epsom Salts, in combination with Iron and Acid, may be taken with advantage, as thus:—Sulphate of Magnesia, 6 drachms; Sulphate of Iron, 12 grains; diluted Sulphuric Acid, 1 drachm; plain or Peppermint Water, 12 ounces; mix, and take 1 tablespoonful three times a-day. Perhaps the most agreeable, and certainly the most elegant form in which this Salt can be administered, is dissolved in an infusion of Roses; the mixture may be thus prepared: — Take of Sulphate of Magnesia, 1 ounce; red Rose Leaves, dried, 3 drachms; add a pint of boiling Water; let it stand two hours, then strain, and add diluted Sulphuric Acid, 1½ drachms; lump Sugar, 6 drachms Dose—a wineglassful once or twice a-day, or as often as required. If there is great debility of the stomach, ½ a grain of Sulphate of Quinine may be added to each dose of either of the above mixtures which contain acid; besides acting as a tonic, this appears to increase the aperient property. One of the most convenient, and best occasional purgative in use, is the Epsom Salts in combination with Senna, a mixture generally known as the Black Draught. A form of preparation will be found under the head of *Draught*.

We have already spoken of Coffee as a good vehicle for the administration of Epsom salts. A simple infusion, however, of the berry will not develope the aroma sufficiently to hide the nauseous bitter of the Sulphate, of which 1 ounce, with 2½ drachms of ground Coffee, should be boiled in a pint of Water for about two minutes in a glazed vessel: before straining, let the mixture stand for about 10 minutes, then bottle and sweeten to taste; a wineglassful or more may be taken when required; this is a favourite formula with the French physicians, from whom we obtain the recipe.

One ounce of the Sulphate of Magnesia dissolved in a pint of warm Water is a good injection for those troubled with ascharides or thread-worms: its utility in inflammatory diseases, in small and repeated doses, combined with Acetate of Ammonia and other febrifuges, is universally acknowledged; and its consumption among all classes of the community (especially the poorer ones), must be truly enormous. The small pointed, transparent, colourless crystals of these salts very closely resemble those of Oxalic Acid—a most virulent poison; and fatal accidents have resulted from mistaking one for the other, there is, however, a very simple test, take a small crystal, and put it on the tongue—if it have an intensely acid and burning taste it is not Epsom salts, which is simply disagreeable and slightly bitter. See *Purgatives*.

EPULIS (Greek *epi* and *oyla*, the gums). A small tubercle on the gums, which is thought sometimes to become cancerous. See *Gums*.

EPULOTICS (same root as above). Medicines which dry up the moisture of wounds, are sometimes so called.

ERECTILE TISSUE (Latin *erigo*, to erect). The tissue peculiar to the penis, nipple, &c.; that of the vagina has been termed *retiformis*, and lately *corpus cavernosum vaginæ*. There is also a similar tissue constituting *Nævus* (which see). From the same root comes

ERECTOR. A muscle of the *Clitoris*, and of the *Penis* (which see).

ERETHISMUS (Greek *erethiso*, to excite). Constitutional irritation, sometimes called into action by mercury, in which case it is it is termed *E. mercurialis*, or Mercurial Erethism.

ERGOT OF RYE (Latin *Secali cornutum*). There is considerable diversity of opinion as to the real nature of this substance, which is a strong vegetable irritant; but most believe that it is a diseased production of the grain, a kind of fungoid growth developed thereon; the grain so affected being sometimes called "spurred rye," from the peculiar curvature of the growth, which resembles in shape a cock's spur, and sometimes attains the length of an inch and a half, varying from ⅛th to ¼th of an inch in thickness, and being of a black colour. It is found on some other grains, but chiefly on rye, and is a most valuable adjunct to the accoucheur, on account of its specific action on the womb, which it causes to contract, and thus expedites the process of parturition. It is also said to be useful in arresting uterine hæmorrhage, and in counteracting many morbid conditions to which the uterus is liable, especially those proceeding from a bad state of the vessels. The dose is from 10 to 30 grains or more, in powder, given in Treacle or Jam, and repeated every half-hour. The Powder loses much of its efficacy by keeping, and is, too, sometimes adulterated with linseed meal; and when this cannot be depended on, it is best to use a Decoction, made by boiling 4 ounces of the bruised grain in 2 pints of Water until half is evaporated, then strain; give a tablespoonful every half-hour; or use the tincture of the Dublin Pharmacopæia, dose 10 to 60 minims; or the Etherial Tincture of the London, which is twice as strong.

In countries where rye is largely cultivated, its being taken in a diseased state is said to have given rise to epidemic diseases of a gangrenous character, not preceded by fever, inflammation, or any considerable pain; the early symptoms being numbness, cold and livid skin, dull heavy pain, and swelling; eventually the gangrene seizes upon the nose, fingers, or other part, which drops off. This disease has received the name of

Ergotism; one of its forms is the *Convulsive*, which is characterized by violent spasmodic convulsions; and the other, the *Gangrenous*, which we have just described. It is known in Germany, where it chiefly occurs, as the Creeping Sickness.

Erodants (Latin *erodo*, to gnaw off). Substances which eat away, as it were, extraneous growths. (See *Caustics*, *Escharotics*.) From the same root comes also

Erosion. Destruction by ulceration.

Erratic (Latin, *erro*, to wander). Wandering, irregular; applied to flying and shifting pains, like those of Gout, Erysipelas, Gestation, &c.

Errhines (*en* in, and *rin* the nose). Substances which create sneezing, and an increased secretion of the mucous membrane that lines the nostrils, called the pituitary membrane. Several different drugs are contained in this class, whose operations vary greatly in intensity and duration; they may generally be referred to two orders—namely, *Sternutatory*, such as Tobacco, Hellebore, Euphorbium, &c.; and *Evacuating*, as Asarum, &c., which last are more calculated for aged and infirm persons.

Great virtues are sometimes attributed to this class of remedies, but we question if permanent benefit is ever derived from them. There can be no doubt that they do occasionally afford relief in head or ear-ache, neuralgic pains, and some cases of ophthalmia, but their action is purely that of local stimulants, and, not as some nosologists have supposed, by diminishing the quantity of fluid circulating in the vessels near to the parts to which they are applied; there is no vascular depletion occasioned by them, and the relief which they give is but temporary.

Error Loci (Latin for error of place). A term formerly applied to certain derangements in the capillary system, but now scarcely ever used.

Eructation (Latin *eructo*, to belch forth). This is a frequent rising of gaseous or other fluid into the mouth; it is a common symptom of dyspepsia and other forms of indigestion, to which those who overload the stomach are especially liable; its extreme form is called *Waterbrash*, (which see,) and *Flatulency*.

Eruption (Latin *erumpo* to break out). A term applied to acute cutaneous, or *Skin Diseases* (which see).

Eryngo. The *Eringum Maratinum*, or Sea Holly, belonging to the natural order *Umbeliferæ*, must be included among the medicinal plants, as it possesses demulcent and expectorant qualities. The root, commonly sold as Candied Eringo, is washed and slit, and prepared with syrup; it is pleasant to the taste, and useful in coughs and inflamed states of the bronchial passages. We give a cut of the plant.

Erysipelas (Greek *eryo* to draw, and *pelas* adjoining). This disease was so named by the ancients from its propensity to spread rapidly to the surrounding parts. The Romans called it *Ignus sacer*, bad or detestable fire; it has been popularly known as the Rose, from its bright red colour; and as St. Anthony's Fire, partly from its burning heat, and partly because the saint whose name it bore was supposed to have the power of curing it with a touch. There are several species of this disease, distinguished as *Phlegmonous*, *Edematose*, *Gangrenous*, and *Wandering*; but without going into the particular characteristics of each, it will be sufficient for us to state what are the general symptoms of Erysipelatous inflammation, and best remedial measures. We will first say a few words as to the cause of this inflammatory affection of the skin, which often commences very suddenly, and spreads with a rapidity truly alarming, especially, when as is often the case, it first makes its appearance on the head, face, or neck, and so involves some of the most delicate and susceptible organs of the human frame. Vicissitudes of cold and heat causing peculiar conditions of the atmosphere, may be named among the most common *causes* of this disease, which frequently appears to originate in the slightest puncture or scratch of the skin, as also from wounds or sores; it is very contagious, and its appearance in a hospital ward is greatly dreaded, as wounds and amputated parts which up to the time of this visitation have been going on extremely well, frequently assume an inflamed, probably a gangrenous character, which leads to a fatal termination of the case. In a house where a confinement is taking, or is likely to take place, Erysipelas should be carefully guarded against, as there is undoubtedly a close connection between that and child-bed fever, which is so frequently fatal. On systems debilitated by any disease, whether acute or chronic, this inflammatory affection appears to seize with peculiar avidity, and to spread through the tissues of the skin most rapidly; it is when extending beneath this that it constitutes what professional men term *phlegmon*, meaning literally to burn—then it is that purulent matter forms, the parts slough, or mortify, and gangrene ensues. No unprofessional person should attempt to tamper with this condition of things; there must be a free use of the lancet to let out the morbid matter, and the most prompt and decisive line of action adopted; if a limb is so affected, or any part that can be excised, its removal will probably be necessary to give the patient a chance for life.

Among the predisposing causes of Erysipelas may be also mentioned want of cleanliness, insufficiency or bad quality of the food, and irregularity of living; there may be hereditary and constitutional predisposition, and where this exists, the inflammation is very easily excited, strong mental emotion, or a fit of inebriety, being sometimes sufficient to bring on an attack; it often co-exists with or immediately follows some fevers, in which it may be presumed that purulent matter enters into the venous circulation.

The *symptoms* of an attack are usually of a febrile character, such as shivering, headache, furred tongue, accelerated pulse, and often derangement of the stomach for a day or two previously; then there is a tingling, and burning sensation with stiffness and pain at some particular part, followed by a discolouration of the skin, and a slight elevation of the surface; the red or purplish tint is confined at first to one spot, but soon extends itself, and includes the limb or part affected; frequently this is the head, which, with the face, becomes so swollen and disfigured that the patient cannot be recognised; the eyelids puff out and entirely close the eyes, and each avenue to the senses is for a time closed. In very bad cases delirium and coma come on, and death ensues from effusion on the brain; sometimes the patient dies from suffocation, the glottis being closed, on account of the internal swelling of the throat; and all this may take place in a few hours, so rapid is the progress of the disease. In the milder forms, the patient may be tranquil; until the swelling subsides, there will be a little wandering of the mind probably, more particularly at night, and uneasy restlessness from the pain and inconvenience of the swelling. As the redness extends from the part first affected, that part becomes paler, the swelling there subsides, and sometimes vesicles, like those caused by a scald, appear on the surface; if the inflammation is merely superficial, it is neither very troublesome nor dangerous; but when it becomes *phlegmonous*—that is, dips down and affects the deeply-seated tissues, there is great cause for alarm; when this is the case the colour is generally very florid, the tingling and the burning sensation severe, and the surface hard and firm to the touch. The young and sanguine are most likely to be affected in this way; those of a feebler habit more commonly suffer from the *edematous* form of the disease; in this the parts affected are of a paler red, and softer and inelastic, so that they pit on pressure.

There is a variety of Erysipelas called *Infantile*, which affects infants at birth; it commences generally at the navel, and extends quickly to the extremities, which are hard, firm, and much swollen, and prone to become gangrenous.

Treatment.—Having a certain course to run, whose period cannot be shortened, the great object of the medical attendant will be to conduct his patient safely through it; he will probably at first administer cooling aperients, or, if the tongue be foul, precede these with an emetic of Ipecacuanha and Tartarized Antimony, following it with 3 grains of Calomel, if the patient be of full habit, and soon after a Black Draught; bleeding may also be necessary, especially if the febrile symptoms run high; if there is much headache, leeches at the back of the head, and a blister between the shoulders, will be useful, or cupping at the back of the neck, with a mustard foot-bath. When the aperients have operated freely, give a saline mixture like this:—Sweet Spirits of Nitre 2 drachms; Sulphate of Potash, 2 drachms; Liquor of Acetate of Ammonia, 2 ounces; Camphor Mixture, 6 ounces: take two tablespoonsful every four hours; or, if the stomach be irritable, give an effervescing mixture as thus:—Bicarbonate of Potash or of Soda, 2 drachms: dissolve in 6 ounces of water; sweeten with 2 drachms of Syrup of Orange peel: pour out two tablespoonsful in a wineglass, and add 15 grains of Citric or Tartaric Acid, the former is best of the two; but, better still, is a tablespoonful of fresh Lemon Juice: stir and drink while effervescing. The patient during this treatment must be kept on low diet, taking nothing but mild diluent drinks; but, should the strength rapidly decline, tonics must be admininistered: Quinine is the best, in 2 or 3 grain doses every four hours; let the vehicle be Wine; if the stomach will not bear this, try an enema of thin Starch, with 3 grains of the above tonic in it. Arrowroot, Flour, Powdered Starch, Magnesia, or Hair Powder should be dusted over the parts affected; should these not afford the desired relief, try bathing with Tepid water or Poppy fomentations: a line drawn round the diseased part with Caustic, so as to make a band about 1 inch in breadth, will frequently stop the spreading of the inflammation; care must be taken that no skin untouched by the caustic is left in the breadth of the band, or it may render the precaution nugatory. A lotion of Lunar Caustic, in the proportion of 1 scruple to 1 ounce of water may also be applied with a camel hair brush over the whole inflamed surface. In Phlegmonous Erysipelas, hot fomentations and poultices, leeches, and other dipletive measures must at once be resorted to, and this, as before mentioned, should be under the direction of the medical adviser.

The proper treatment of Infantile Erysipelas is to foment the inflamed parts with a strong and hot Poppy Decoction, and give every hour or two a tablespoonful of Decoction of Bark, or of this mixture:—Sulphate of Quinine, 6 grains; diluted Sulphuric Acid, 12 grains; Tincture of Gentian, 2 drachms: a teaspoonful to be given every two hours. An enema of Beef-tea or Mutton-broth should be thrown up if the patient seems to require it.

Directly Erysipelas sets in, and especially if it appears likely to assume a severe form, all the hair should be cut or shaved off the parts near where it commences. If not severe, it is best not to discolour the skin by applying Caustic, but to use a lotion composed thus:—Sugar of Lead, 1 drachm; Rain or Distilled Water, 1 pint, mix; add Tincture of Opium, 1 drachm: wet rags to be kept applied. The following application for Erysipelas, and some other cutaneous affections, has lately been recommended by high Continental authorities:—Alum, reduced to impalpable powder, 30 parts; White Precipitate, 1 part. Rub up well together, and place the powder in a bottle, and then add from 90 to 100 parts of Glycerine. Shake the bottle until the mixture assumes a creamy consistence, and repeat the shaking whenever the application is about to be employed. The chief characteristics of Erysipelas are its sudden appearance, red colour, tendency to spread, febrile symptoms, heat and tenderness of the skin, and blistered surface. We call especial attention to these, because many affections of the skin are thought to be this, although they bear but a slight resemblance to it.

Erythema (Greek *erythros*, red). Morbid redness of the skin, sometimes called Inflammatory Blush, and considered as a milder form of Erysipelas; from which, however, it differs in not being contagious, and yielding more easily to medical treatment. Nosologists distinguish 7 different species of this disease, viz.—Fugacious *(E. fugax)*; Smooth *(E. lævic)*; Marginated *(E. marginatum)*; Papulated *(E. papulatum)*; Tuberculated *(E. tuberculatum)*; Nodose *(E. nodosum)*; Fret, or Erosion of the Skin *(E. intertrigo)*; these names all having reference to some peculiarity of form or colour in the eruption. Thus sometimes the surfaces are smooth and shining and marginated, or they are like small pimples or tumours, appearing generally on the face, breast, or arms; again they appear as red shining patches on the front of the legs, and sometimes on the arms, assuming a purplish tint after some days, like a bruise. This form appears to be almost peculiar to young women. Then there is the *red gum* or *tooth rash* of children, and the redness occasioned by irritating discharges, such as of the fauces in diarrhœa, or of tears when of an acrid character, or the chafing between the folds of the skin of children, which results from want of proper care in frequent washing and drying the parts. Sometimes after dancing or any violent exercise, drinking cold water when in a heated state, or eating too largely of fruit or other substances, red spots and patches will appear on the back, shoulders, and face, more particularly of young persons; and all these are different varieties of Erythema, one of whose peculiar characteristics is that the redness disappears on pressure of the inflamed part, but shows itself again in a second or two after the finger is removed.

The proper *treatment* for children is bathing the part affected freely with hot water, and then drying thoroughly, and applying Powdered Starch or Violet Powder; give, at bed-time, 2 or 3 grains of the Grey Powder (Mercury and Chalk), with a Senna Draught, or a dose of Castor Oil in the morning; following it up with small doses of Quinine, according to the age of the child. Should the inflammation not yield to this treatment, after a few days, use the Sugar of Lead lotions recommended for Erysipelas, and still proceed with the Quinine, to which rapidly spreading Erythema scarcely ever fails to yield. This course of treatment may be applied in most of the common forms of the disease to patients of all ages; but there are one or two exceptional forms to which it is not applicable, such as the *E. nodosum*, already alluded to as chiefly attacking young women, and of these such as are of a delicate constitution; it is especially likely to come on after scarlet fever or measles. As this is attendant on a debilitated state of the system, it requires nourishing food and strengthening medicine. For its removal some preparation of Iron, with Infusion of Quassia, and an aromatic tincture, or Cinnamon Water, will make a good mixture; or take the following:—Sulphate of Quinine, 12 grains; diluted Sulphuric Acid, 1 drachm; Compound Tincture of Cardamums, ½ an ounce; Infusion of Roses, 12 ounces: dose, two tablespoonfuls two or three times a day; change of air is also desirable.

The *E. tuberculatum* is not an uncommon form of the disease, generally showing itself on the face, especially of sedentary females. It is often called Erysipelas, but it is usually unattended with febrile symptoms, or constitutional derangement of any kind, and exhibits no tendency to spread rapidly. Local remedies are of little service in this case; indeed they are more likely to do mischief, by inducing congestion. When the disease is acute, a brisk mercurial aperient, followed by cooling saline medicines, may be of service; when it becomes chronic, Arsenic is the only remedy likely to cure it, and this will not always effect the object: it should be taken in the form of Fowler's Solution (see *Arsenic*). Plenty of walking exercise, with due care as to diet, and strict attention to the laws of health, are the grand specifics after all. See *Rashes*, *Skin Diseases*.

Erythric Acid (Greek, *erythraino* to redden). A substance procured by the action of Nitric on Uric, or Lithic Acid.

Erythrogen (Greek, *erythros* red, and

gennao to produce). A green coloured substance found in the gall bladder in a case of jaundice, which being mixed with nitrogen produces a red compound.

ESCHAR (Greek, *escharo*, to form a scab or crust). This term is applied in surgery to what is called a dry slough, a decomposition of the animal organization, by means of some powerful caustic application.

ESCHAROTICS. Are those substances employed to produce the above result, because they have the power of eroding or dissolving animal solids, which they do either by combining therewith, and forming a soft pulp, or by causing the elements to enter into new combinations, and so destroying their cohesion and altering their composition. Thus their operation may in general be considered as purely chemical; produced in most cases by some peculiar affinity existing between them and the solids or fluids, with which they are brought into contact; so Nitrate of Silver, one of our commonest Escharotics, by the action of the muriatic acid continued in all animal fluids, is decomposed, and covers any part to which it is applied with a whitish film, which is in fact a Muriate of Silver. Escharotics differ greatly in the energy of their actions, some eroding merely the cuticle or external surface of the skin, as Nitrate of Silver and Sulphate of Copper; others, as Caustic Potash, and Quick lime, decomposing the animal matters to a considerable depth; with some too there is, besides the chemical, a specific action, not obtainable from others; of that class, Arsenic, may be named as an example.

We commonly find Escharotics classed under two heads, viz:—the *Potential Cauterants*, and the *Actual Cautery*, (see *Caustics*); the former being, as before observed, chiefly chemical agents. Among those most commonly employed to produce counter irritation, or remove fungoid or morbid growths of any kind, are the strong mineral acids, such as Sulphuric and Nitric; pure Alkalies, and some Metallic Salts, especially Nitrate of Silver. The actual cauterants such as Hot Water or Vapour, Moxa, or Heated Metal, are used for their primary or secondary actions; the first being the immediate destruction of the part to which they are applied, and the second to stimulate and arouse the nervous energy of the system, so as to enable it the better to meet and combat any disease with which it may be attacked. Atony and laxity of the muscular system, neuralgic pains, and even paralysis are sometimes materially relieved by these means.

ESCULENT (Latin, *esculentus*, good for food). Eatable; a term applied to such plants, or any parts of them, as are fit for food. From the same root comes also *Esculine*, an alkaloid, obtained from the *Æsculus Hippocastanum*, or Horse Chestnut, said to possess febrifuge properties.

ESO-ENTERITIS (Greek *eso*, within, and *entera* the bowels). Inflammation of the mucous membrane of the *Intestines* (which see), and *Inflammation*.

ESO-GASTRITIS (Greek *eso*, and *gastro*, the stomach). Inflammation of the membrane of the *Stomach* (which see), and *Inflammation*.

ESOPHAGUS or ŒSOPHAGUS (Greek *oio*, or *oiso* to carry, and *phago* to eat). Literally the food-carrier, commonly called the *Gullet* (which see). This is the passage by which the food is carried from the mouth to the stomach; it is a flexuous canal or tube, extending from the throat, or fauces, to the stomach, and is narrowest at the upper end, where there is the greatest liability of a stoppage by an attempt to swallow any substance too large for the passage. See *Choking*.

The Esophagus is composed of two layers of muscular fibres, the external being placed longitudinally, and the internal disposed in circles, by the contraction and expansion of which the food is propelled downwards; the passage is lined with a layer of soft mucous membrane, and a moderately thick cuticle, which is a continuation of that of the lips and mouth. See *Alimentary Canal*, *Throat*.

ESOPHAGOTOMETRY. Is the operation of cutting into the Esophagus for the purpose of extracting any foreign body which may be lodged there.

ESSENTIAL OILS. These are oils obtained by distillation from various plants of an odoriferous nature, such as Aniseed, Anethum or Dill, Bergamot, Carraway, Pepper and Spearmint, Rose and Rosemary, &c., all of which are used medicinally; although it is the perfumers who are the largest consumers of these oils, some of which they term *Essences*, a term derived from the Latin *essentia*, whose origin is an obsolete form of the verb *esse* to be: so that the term actually means that which constitutes the being of a thing; it is therefore often applied to any strong preparation. The Essences included in the modern Pharmacopœias are those composed of 1 part of the oils above named, with some others, to 9 parts of Rectified Spirits; they are convenient for making up extemporaneous prescriptions, and for all purposes in which Aromatic waters are required; 9 drops of Essence being sufficient for one ounce of *Water* (which see), and *Aqua*.

Essera. A name for the *Nettle Rash* (which see), and *Urticaria*.

Ethal. A peculiar oily substance obained from *Spermaceti* (which see).

Ether and Ethiops. See *Æther* and *Æthiops*.

Ethmoid (Greek *ethmos*, a sieve, and *eidos*, likeness). A bone of the nose perforated for the transmission of the olfactory nerves, and so called because it is cribriform, or sieve-like; the ethmoidal crest (see *Crista Galli*), is the sharp process of the ethmoid bone. See *Nose*.

Euchlorine. The name given by Sir Humphrey Davy to the protoxide of *Chlorine* (which see).

Eudiometer (Greek *eydia*, calm weather, and *metron*, a measure). An instrument used for ascertaining the quantity of oxygen in atmospheric air or any given gas; this instrument was invented by Dr. Priestley, and employed by him for ascertaining the amount of the life-sustaining principles in the air of different localities, and under different circumstances; its construction was at first extremely simple, the principle upon which its use depended being, so far as atmospheric air and oxygen gas were concerned, to expose them to the action of some substance either solid, fluid, or gaseous, which, on account of its affinity for oxygen, combines with it, and leaves the air with which it is mixed unacted upon. Various processes have been employed since Priestley's time in *Eudiometry* as it is called; but we need not describe them, as they are such as only a professional chemist could employ so as to obtain sufficiently exact results to be of any practical use. See *Atmosphere*, *Oxygen*.

Eugenia Caryophyllata. The scientific name of the Clove tree, of the natural order *Myrtaceæ*. See *Caryophillus*, *Cloves*.

Eupatorium. A genus of plants belonging to the natural order *Compositæ*, and including no fewer than 294 species, among which are the following used medicinally:—*E. Cannabinum* (Hemp Agrimony) a native of Europe, and common in this country, being found mostly on the banks of streams; it was formerly much employed as a tonic and febrifuge, and is still so to some extent; the turf-diggers of Holland take an infusion of it for the ulcerated and diseased legs to which they are greatly subject; the expressed juice, when taken in large does, excites both vomiting and purging. *E. perfoliatum* (Thorough Wort), is found in moist meadows and boggy places in North America; all parts of it are intensely bitter, and a decoction of its leaves is taken as a tonic and stimulant; it is recommended by American physicians as a substitute for Cinchona, in the treatment of intermittent fevers; in large doses the infusion or decoction o the whole plant is emetic, sudorific, an aperient. *E. Agyapama* is a native o South America, being found on the righ bank of the Amazon; it has been introduce into the East Indies, and is employed as diuretic and diaphoretic, and also as an antidote for the bites of venomous serpents an insects. Other species of the tribe posses medicinal virtues, thus *E. Aromaticum* an *F. Odoratum* have fragrant roots, and *E. Rotundifoliata*, as well as *E. Perfoliatum* before named, have been employed in rena diseases, and in consumptions; from the *E* *Cannabium*, and some other species, an alkaloid is procured, which is called *Eupatorine*

Euphorbium. Is a friable gum resin being the concrete juice of the *Euphorbi* *Officinalis*, and other species of the natura order *Euphorbiaceæ*. According to the mos recent chemical investigations, it appears t consist of resin, wax, and saline matte (mostly malates), the former being th active principle. It is a powerful, acri substance, causing irritation and inflammation of the parts with which it comes i contact, and affecting, by sympathy, th whole nervous system. Taken in smal doses, it causes vomiting and purging; i larger ones, it is likely to produce inflammation of the stomach, which may prov fatal; delirium and stupor, approaching t apoplexy, have followed the inhalation o the dust merely. It is now little used, except externally to produce vesication; in cases of poisoning by it, after emetics or the stomach pump, demulcent or oily fluids should be given, and venesection resorted to for the reduction of the ensuing inflammation. See *Spurge*.

Eustachian Tube. A canal which extends from the tympanum to the pharynx, so named from its discoverer, Bartolomeo Eustachius, an Italian anatomist of the 16th century. See *Ear*, *Pharynx*.

From the same discoverer is named the *Eustachian Valve*, a fold of the lining membrane of the auricle, which in the fœtus is supposed to conduct the blood into its two different courses. See *Heart*.

Euphrasia Officinalis (Greek *euphraino*, to gladden). The scientific name of the Euphrasy, or Eye-bright, a plant of the natural order *Scrofulariaceæ*, common in Great Britain, and formerly employed medicinally, especially in diseases of the eye; its reputation appears to rest, however, chiefly in its bright appearance, which, in times more superstitious than the present, was supposed to indicate its power of giving clearness to the sight. Culpepper says, that "if the herb was as much used as neglected, it would help to spoil the spectacle maker's trade;" and he attributes to it the virtue of not only restoring sight decayed through age, but of helping a weak brain and memory. Of course, our readers will wish to see a cut of such a wonderful herb, and here it is; its leaves and stems are slightly aromatic and bitter; but we believe not in their medical properties.

Evacuation (Latin *evacuo*, to empty). The discharge of the fæces, &c.

Evaporation (Latin *evaporo*). The transformation of a liquid into a gaseous state by the action of heat: it is by evaporation, or driving off the watery portions, that the juices or decoctions of plants are converted into extracts; and to this principle it is that spirit lotions owe their efficacy; applied to inflamed and heated surfaces of the body, they expand and fly off rapidly, leaving partial vacuums, into which fresh air enters and diffuses a refreshing coolness.

Evolution Spontaneous. A term applied by Dr. Denman to natural delivery, in cases in which the shoulder is so far advanced into the pelvis as to preclude the possibility of relief by operations. See *Labour*.

Exacerbation (Latin, *exacerbo*, to exasperate.) An increase of febrile symptoms is so called. See *Fevers*.

Exania. (Latin, *ex* out of, and *anus*). A falling down of the anus. See *Prolapsus Ani*.

Exanthemata (Latin *exantheo*, to blossom). Efflorescence; formerly understood to mean eruption generally, but now limited in its application to superficial red patches, irregularly diffused, and terminating in cuticular exfoliation. See *Rashes.*

Exæresis (Greek, *exairio*, to remove). An old term in surgery signifying a removal of diseased parts. See *Amputation.*

Excitants (Latin, *excito*, to stimulate). These may be *particular* as intended to act on a certain part or organ, as diuretics on the kidneys, or *general*, as brandy or other spirit. See *Stimulants.*

Excitants may be classed under the terms of *Ordinary*, *Extraordinary*, and *Superfluous*, the first are those which serve to keep up that regular and unceasing action which is necessary to preserve a sound state of mental and physical health; among those which operate on the mind chiefly, we may mention, occupation of the mental faculties to some definite end; among those which act on the body may be named Atmospheric Air, Aliment, Electricity, Exercise involving muscular exertion, Heat and Light. Among the extraordinary excitants we have Alcoholic stimuli, with Tea, Coffee, Spices, Drugs, &c., and Atmospheric changes producing peculiar states of the air; these are physical: those of a mixed character are, the Sexual stimuli, Athletic sports and exercises, Dancing, Travelling, Witnessing exciting scenes, &c.; while those of a more purely mental character are the passions and emotions, such as Love, Joy, Hope, Fear, Music, Poetry, Political and Polemical argument, and, the most powerful of all, Religion. The classification, it will be seen is somewhat arbitrary: the influence which the mind and body mutually exercise over each other rendering it impossible for one to be unusually stimulated, without the other partaking in some measure in its excitement. As more will be said on the various stimuli above named under their several heads, we shall here press upon our reader's attention, the importance of obtaining regularly those excitants which are necessary to a proper state of mental and bodily health; of partaking in moderation of those which are, and ought to be, but occasional and extraordinary; and of avoiding as much as possible those which are altogether superfluous, and therefore mischievous.

Excitation. Is the term expressive of an action by which the vital functions are stimulated to an increased performance of their duties; it is synonymous with *Stimulation* (which see).

Exciting Causes of disease are so various in their character and modes of action that we cannot here particularise or describe them; among them may be named Contagion, Infection, Atmospheric states or Climates, Food, Drink, Imperfect clothing, Uncleanly and vicious habits, occupations and modes of life; for farther particulars of all of which see the several heads.

Excretions. These are the fluids which are no longer serviceable to the body, and are therefore rejected by means of the proper organs; they must not be confounded with the *Secretions* (which see), such as the Milk or Gastric Juice, Salivary or Pancreatic fluids, nor even the Bile, which, although poisonous in a high degree when retained in the blood, is yet, when secreted and mixed with the food in the alimentary canals, very serviceable in stimulating the digestive powers to a proper performance of their work.

We may briefly point out the difference between *secretion* and *excretion* as thus: The former is the process of formation of peculiar fluids from the blood, of which the elements only exist there, and which are intended to answer some useful purpose in the animal economy; while the latter is the process of abstracting from the blood matters which do already exist there, and which, if suffered to remain, would become poisonous.

Of Excretions, the urine is perhaps the best example that could be adduced, consisting as it does of water, holding in solution mineral salts, and various substances, which have been reduced to elementary forms by yielding up the nutritive or otherwise useful principles, which held them in combination. Here we find *urea*, a narcotic poison, which if, from disease of the kidneys or other cause, it is retained in the blood, inevitably causes death. The excrements voided from the bowels, again, are matters which cannot be retained there without great danger; and the perspiration, if it be not allowed to escape through the pores of the skin, will be sure to occasion some inflammatory or other disease.

From all this we should learn how important it is to the health of the body that the *Excretory organs* should be kept in a proper state, so that their regular operations be in no wise interfered with.

Excretory Duct. Is any duct or passage which leads from a gland, such as the hepatic and parotid, and afford a channel for the escape of an *Excretion.*

Excoriation (Latin *excorio* to take off the skin). See *Abrasion.*

Excrement (Latin *excrementum* from *excerno*, to separate from). The alvine *fæces* or *excretion*: this is a general term for any ejection of animal matter, such as the *Fæces*, *Perspiration*, *Urine*, (which see).

Excrescence (Latin *excresco*, to grow from). A useless protuberance, an unnatural and morbid growth, applied in Surgery to *Warts*, *Wens*, &c., (which see).

Exercise. We have already spoken of this as one of the most important excitants or stimulants by which bodily health is preserved; it may be briefly distinguished as spontaneous muscular movement, by which a stimulus is given to the system generally, and to each of the vital processes particularly. A certain amount of exercise is absolutely necessary to keep the machinery of life in proper working order; true, some persons do manage to live with very little of it indeed, but they are generally miserable creatures without heart, hope, or energy; or, if they enjoy their existence, their enjoyment is like that of the well-fed swine, their pleasures are merely animal, and if they do not die suddenly of apoplexy or some similar disease, they linger on in a plethoric state, with disordered functions and diseased organs, which by and by refuse to work at all, and so death ensues. Exercise taken with moderation and regularity is undoubtedly the grand panacea of health, and the goodness of God may be noted in the fact, that he has rendered it absolutely necessary for the great majority of mankind to take sufficient of it in the very act of obtaining the other necessaries of existence. Look at a man engaged day after day in active bodily exercise; what a development is there in his whole frame of muscular power! how his energies, both mental and bodily, are stimulated and brought into play: obedient to the promptings of his will, his nervous system is aroused, his muscles are called into action, they send the blood more quickly through the veins, and there must be accelerated action of the heart to sustain the demand for a quicker supply of the vital fluid, which also passes more rapidly to the lungs to throw off its load of carbon, and become purified by contact with the oxygen of the atmosphere; to effect and preserve the balance of the circulation, the play of the lungs must also be more free and rapid; the worker draws a deeper breath, and makes more frequent inspirations than the looker-on: the work of secretion, digestion, and excretion all go on more quickly with the active than the inactive man; he requires more nourishing food and drink (it should be unstimulating) to supply the waste which is going on in his system, and to keep in repair the ever-wearing structures of the body; and this is the proper condition of a truly healthful existence. "Better rub than rust" may be said of the body as well as the mind; the Almighty has so ordered it that the physical waste resulting from regular daily toil, shall be constantly supplied by the stimulus given to the organs of nutrition, and that the life of the toiler shall be the healthfulest and happiest state of human existence; we speak of him, of course, as one having inherited a sound vigorous constitution which he has not abused by intemperance or other sensual indulgences. Such, then, being the case we would say to all who are not obliged to work for a livelihood—for to those who are we need not say it—take plenty of exercise, and take it not by fits and starts, a great deal now, and then none at all; but take it regularly as you would your food or sleep, or any other constantly-occurring want of daily life; walk or ride in the open air every day, and if possible have some object in view so that the mind may be exercised as well as the body; be a botanist, or an entomologist, or what you will, but have some pursuit that may take you abroad, and that frequently, to exercise your muscular powers and inhale the pure fresh air of the country. But many there are who cannot avail themselves of this recommendation, whose duties and avocations confine them to shops, and warehouses, and counting-houses, or to the walls of their habitations, and to such we would offer a few words of advice as to the exercise which they may and ought to take.

For those who are in full possession of health, and desire to retain it, there is undoubtedly no exercise so good as walking, and no time equal to the early part of the day; nevertheless, it is not well to walk far upon what is popularly called "an empty stomach." One who walks before breakfast should always take a crust of bread or a biscuit before he sets out, and he may then walk briskly for two or three hours before he feels the want of the more solid meal; hungry he no doubt will, and ought, to be; but he will not experience that sense of sinking and exhaustion which he would be likely to, if he took nothing at the outset. As to the *pace* and *distance*, the physical powers and habits of each walker must guide him entirely; what would be but healthful exercise to one, would to another, be over exertion. Next to the morning, the evening is the best time for walking for those persons who do not take late and luxurious dinners; for the adage still holds good—

"After dinner sit awhile:"

Although we scarcely think that the accompanying line of the distich contains such salutary advice :—

"After supper walk a mile."

That is if the supper be made a heavy meal, as it never ought to be, for immediately after such, active exercise is injurious; in this case also it should be "sit awhile." See *Meals*.

These remarks refer chiefly to the warmer portion of the year, when it is very unadvisable to take open air exercise, except in the morning before nine or ten o'clock, and evening after five or six. In the winter, the middle of the day is the best time for walking; but then the dinner should be late, and rest directly the walk is over, unless it has been a very gentle one. It is in walking that the greatest number of the muscles are called into play, and the whole of the bodily frame gets most exercised; in this way, too, the course may be shaped more in accordance with the wishes of the mind, which is thus more completely aroused and animated; and this, too, is one of the essentials of true healthful exercise. We have already spoken (see *Early Rising*) of the desirability of the walker having some object in view, some pursuit to occupy his mind, having reference to the beauties and wonders of external nature. Questions of abstruse science, business speculations, and the like, should not be allowed to occupy the mind when the body is taking exercise; for the senses require this as well as the muscles, &c., and they, it is likely in such a case, would be to a great extent unobservant, and might almost as well be sleeping. Riding on horseback is the next best exercise to walking, it is healthful and invigorating, and inspiriting; a greater distance may in this way be accomplished, and the mind, through the eye, luxuriates in a greater diversity of scenery; but it does not bring so many of the muscles into play, and is, therefore, scarcely so beneficial to the general bodily health, with which the vigour of the mind is intimately associated; the equestrian it is true, has some advantages over the pedestrian in a hygeian point of view, but we agree that the great balance lies with the latter.

Carriage exercise, for those whose habits of life and infirmities would render either of the above usual modes injudicious, if not impossible, is certainly good; the breathing of the fresh air and excitement of mind which it involves are salutary; and even the poor invalid, who cannot bear his carriage windows opened lest the breath of heaven should visit his face too roughly, may derive benefit from the gentle motion and glimpses from the world of beauty without, giving as much stimulus to *his* mind and body as they will probably bear.

As for children, as soon their legs are strong enough to bear them, by all means let them walk, and run, and play all sorts of antics, as the young lambs do. Nurses' arms, perambulators, and other juvenile carriages are all very well for the weakly and sickly; and these, in suitable weather, should have plenty of open-air exercise, but not as we have seen them, with heads hanging down and eyes closed, joggling about with every shake of the vehicle, or false step of Lucy's, who is often too busily engaged in her own love, or other affairs, to attend much to her charge. A child should never sleep in the open air, but be talked to and amused, and kept awake as long as possible, and brought in when it cannot longer keep awake. Hence, either in the arms or some vehicle, unless closed, long rides are not good for young children, as they soon become sleepy when exposed to the air, and it is best to have them out and in frequently. But, this being the most troublesome course, mothers often send them out for the whole morning or afternoon; although, in only a few cases, where servants are really trustworthy, can they tell how they will be treated, or where they will go to. A friend of ours, a medical practitioner, was much horrified one day while driving through a village near the town where he resided, to see his nursery maid in a round-a-bout, with his child in her arms, twirling away merrily; she had been sent out for a long walk, and stayed to participate in the pleasures of fair-time. Let mothers think of this, and wonder not that their infants are sometimes suddenly seized with fever, or some other contagious or infectious disease, after their long rides with nurse; *they cannot tell where they go to.*

Of the sports and pastimes common to children and adults, we have little space, and, withal, little occasion to speak; if enjoyed at proper times, and in moderation, they are, generally speaking, highly salutary, although much mischief often arises from an excessive indulgence in them. Play is a necessity of juvenile existence, and, to some extent, of adult life also. Play is exercise, and the man or woman who never plays—we do not mean whist or billiards, nor any game of that kind—is not only a morose misanthropic being, but most likely a very unhealthy, as well as unhappy one. Then too, there is exercise for the mind—for the thinking and reasoning faculties, without reference to the bodily powers, on which a few words ought to be said. When severe, as in obstruse studies, or the continued call upon the brain which a literary life necessitates, it is real hard labour—more wearing to both body and mind than that of the stone-breaker on the road; when light it is play, and both are requisite to mental health, only let them be duly proportioned. The man who is always playing is a fool; he who is always working is a self-destroyer; often, alas! an enforced one.

There is one branch of our subject to which we have not alluded, because we were anxious to get the other part disposed of, and be free to give it that full and considerate treatment which its importance demands. We allude to those home and school exercises which its advocates and professors, in accordance with the present rage for long name with Greek roots, have agreed to call *Calisthenics*, which is defined to mean, "exercises for health, strength, or elegance." We find this subject so well treated in a valuable repertory of information, called "Facts for Everybody," that, with permission, we quote the article verbatim:—

Use of Calisthenics. It is an admitted physiological fact, that imperfections in the female form originate, for the most part, in defective or irregular muscular action. The calisthenic exercises are calculated to cure deformities of the figure, especially of the chest, to invigorate the system, and conduce to elegant deportment and symmetry of form.

Preliminary Cautions. 1st, that they should not not be performed after a full meal; 2nd, that there should not be any ligatures or tight strings, straps, &c., on any part of the body, but that the clothes should fit easily and loosely; 3rd, that the body should not be too warmly clothed *during* the exercises, but that an additional wrapper should be provided, to cover the body as soon as they are finished; by this means cold will be avoided; 4th, that the exercises should *generally* be performed in a room, in preference to the open air; 5th, that due regard must be paid to the health, age, and strength of the pupils exercised.

Necessary Apparatus. The first thing to be attended to are the cautions we have given above; and then the necessary apparatus, consisting of dumb-bells, back-board, clubs, wands or poles, triangles, and elastic-cord, must be procured.

The Dumb Bells we advise are constructed as follows. To the staff *a* (which is made of oak or ash, six inches long, and one and a quarter inches in diameter), is fixed a hemisphere (*b*), with a male screw (*e*); and to this part is attached at both ends another hemisphere (*c*), fitted with a female screw, so that when these hemispheres are screwed together they form a complete sphere as represented by *d* in fig. 1.

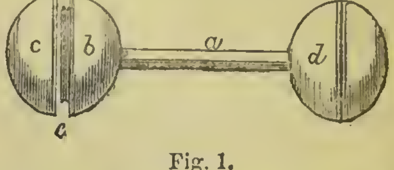


Fig. 1.

By putting lead, or some other weighty material into these spheres, the weight of the instruments can be increased in proportion to the strength of the person using them.

Back Boards should be fitted to the person requiring them, unless they are used for the back-board exercise, in which case they will be as represented in fig. 2. When not used for this exercise, they are fastened to the back and shoulders by means of straps (*a*, *b*, *c*, *d*) which pass round the shoulders and are made to buckle in front. These straps can be lengthened or shortened by passing them through holes in the board (*g*, *g*, *g*, *g*), left for that purpose. The lower part of the board is fastened round the waist by a strap (*e f*), which buckles in front.

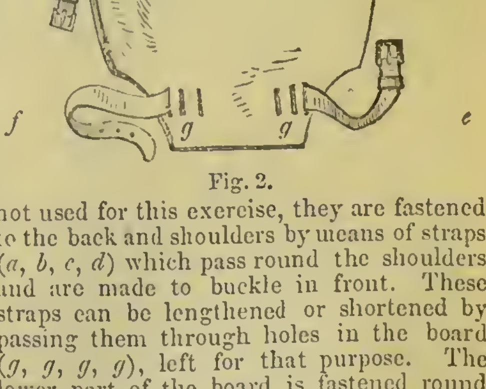


Fig. 2.

The dimensions of the short back-board are as follow, for a large size: length twelve or thirteen inches, breadth ten inches, lower part five inches, and upper part four inches. These measurements can be reduced according to circumstances, age, &c.

The Long Back Board should be broad in the centre, as in fig. 3, so that the flat part may reach across the back of the shoulders, and the handles (*a b*) be long enough to hold in the hands when the arms are extended. Some of these back-boards vary from six feet in length to only three feet eight inches.

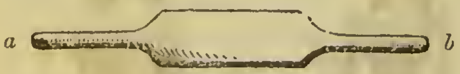


Fig. 3.

The Clubs for calisthenics should be made hollow, as in the annexed figure (fig. 4) varying from twenty to twenty-eight inches in length, and be of a proportionate width. The top is made to screw on, so that the inside may be loaded as recommended for the dumb-bells. By this means, the weight to be forced though the air can be proportioned to the strength or power of the individual to propel it.

The Wands, or Poles, should be light, smooth, and sufficiently thick not to bend. They vary considerably in length; the rule being, that they should be the same as the height of the person requiring them.

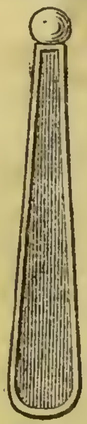


Fig. 4.

The Triangle is a bar of wood attached to a cord at each end; the two cords meet above, as shown in fig. 5, so as to form two sides of a triangle, of which the bar forms the third. A cord is attached to the upper part of the triangle, and this, passing over a pulley, enables the teacher to lower or raise the bar so as to suit the height of the pupil.

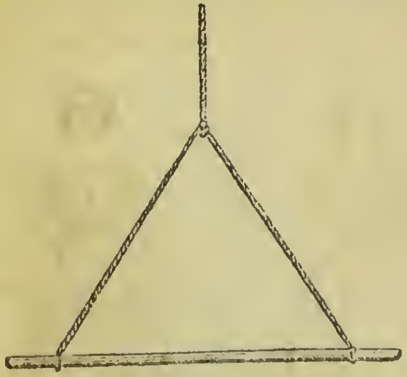


Fig. 5.

The Elastic Cord, fig. 6, is one of the latest improvements in calisthenic exercises. It consists of two handles (*a b*), of a triangular form, to which is attached an elastic cord, made of vulcanized india-rubber. They may be obtained at most toy-shops, and vary in price from two to five shillings, according to the size.

The pupil should commence the exercises with *The Dumb Bell Practice.* The dumb-bells are not to be used at first; but when the pupil has become proficient in the following exercises, then the dumb-bells are to be held firmly in the hands, which are to perform the same motions directed below.

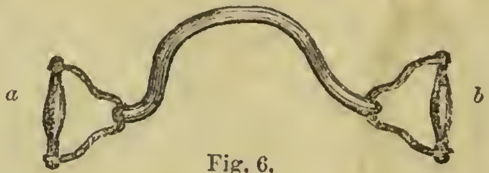


Fig. 6.

Position of Attention. When the word attention is given by the teacher, the pupil is to draw back the shoulders, so as to make them square; the heels are to be placed in a line, and closed; the knees straight, the toes turned out an angle of 60 degrees, the arms hanging close to the body, the elbows turned in close to the side, the hands open to the front, the little finger lightly touching the dress, and the thumb close to the fore-finger. The abdomen is to be slightly drawn in, and the chest advanced, but without constraint; the body upright, inclining a little forward, so that the weight of it may be principally on the fore-part of the feet; the head erect, and the eyes looking straight to the front, as in fig. 7.

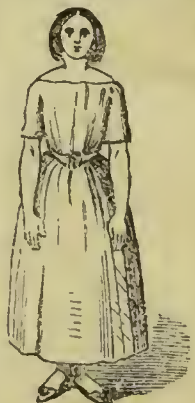


Fig. 7.

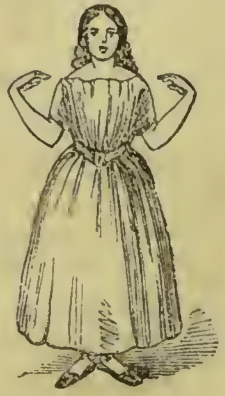


Fig. 8.

First Practice. One.—At the word *one*, raise the hands and bring the tips of the fingers in a line with, and pointing towards the shoulders, the body inclining forward, the head erect, and shoulders kept well back, with the elbows close to the side, as in fig. 8.

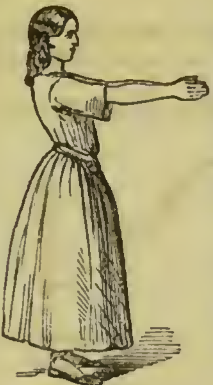


Fig. 9.

Two. — Dart the hands straight to the front, with straight arms, the palms of the hands close together, the thumbs close to the fore-finger, nearly in a line with the chin, as in fig. 9.

These two motions are to be repeated from *two* to *one*, and again from *one* to *two*, several times before commencing *three*.

Three. — The hands are thrown back with straight arms in a line with the shoulders, the palms of the hands to the front, the thumbs close to the fore-fingers, the head erect, and shoulders kept well back, the body inclining forward, the heels raised off the ground, so that the weight of the body rests on the fore-part of the feet, as in fig. 10.

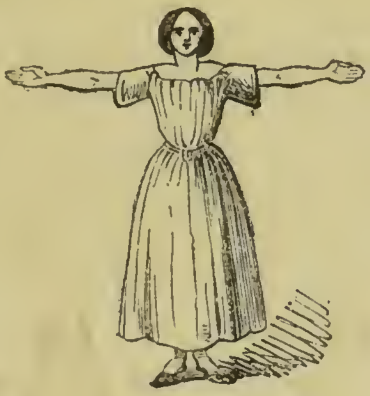


Fig. 10.

These motions are to be repeated from *three* to *two*, and from *two* to *three* several times before commencing *four*.

Four.—The arms are to be brought gradually by the side to the first position, (fig. 7).

Second Practice. One.—The hands are to be brought smartly up with the palms of the hands to the front, the tips of the fingers in a line with the shoulder, pointing upwards, the elbows to be kept close to the side and well back, so as to square the shoulders; the head is to be held erect, and the body slightly inclined forward, as in fig. 11.

Two.—Raise the elbows a little so as to draw them upwards and backwards; then bring the hands smartly down to the side, as in fig. 12, and assume the position of attention, fig. 7).

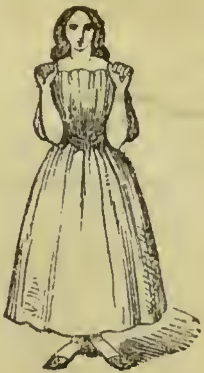


Fig. 11.

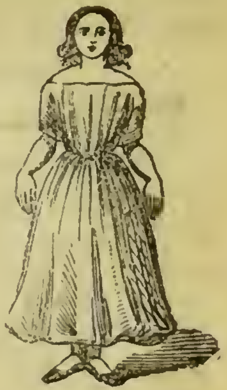


Fig. 12.

Long Back-board Exercises. The long back-boards (fig. 3), are to be held by the handle with the left hand, and the right hand is to be placed on the top of the back-board, while the other end rests upon the ground between the feet, as in fig. 13.

Attention. When this word is given the heels are to be brought in a line, and the back-board brought across in front of the thighs at the full extent of the arms, holding it by the handles with both hands (the backs of the hands to the front), as in fig. 14.

One.—The back-board is to be gradually raised from the position of *attention*, with the arms straight, until the flat part of it is horizontal and over the head, the tips of the fingers in front, and the knuckes behind; the body is to be kept well forward on the fore-part of the feet, and the head erect, as will be seen in fig 15.

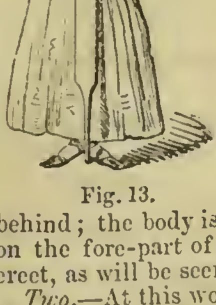


Fig. 13.

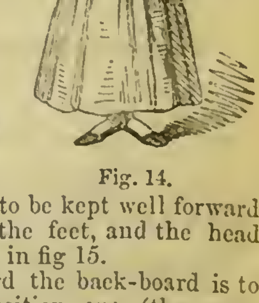


Fig. 14.

Two.—At this word the back-board is to be lowered from position *one* (the arms being contracted), and it is to be brought across the back part of the shoulders (as in fig. 16), still keeping the body well forward, and the head erect.

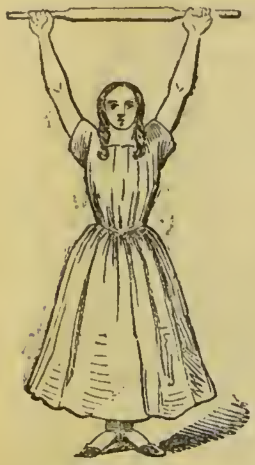


Fig. 15.

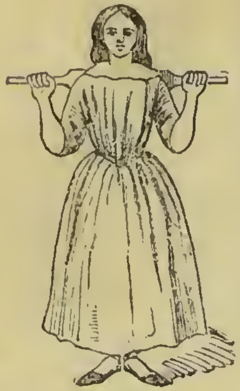


Fig. 16.

In the last position, the pupil will then be required to walk slowly round the room, quickly, and to practise the balance-step without gaining ground.

When the various exercises have been frequently repeated, the word "steady" will be given, when the position of attention (fig. 14) is to be resumed, and at the command "stand at ease," that position (fig. 13), with the back-board, is at once to be taken.

The use of the Broad Backboard; of the Clubs for swinging the arms; of the Wands or Poles for leaping; of the Triangle and the Elastic Cord, will be sufficiently obvious. There are also other.

In-door Exercises. Females much confined to the house, who suffer ill health in consequence, will do well to avail themselves of such as the skipping-rope, battle-dore and shuttle cock, &c., all aids to the required end. Dancing is one of the best preservatives of health, when enjoyed at proper hours, and not carried to excess. But this exercise can only be obtained upon particular occasions, when there are many to share it, and glad music contributes to heighten the enjoyment. Really the best indoor exercise for developing a graceful bearing, and for diffusing its healthful influence over the whole frame, is that of throwing balls dexterously, according to any of the contrivances of fancy. Persons who become expert in this practice may throw from one to eight balls with astonishing dexterity, the exercise being sufficiently stimulating to encourage its frequent repetition; quickening the eye, and imparting a healthful vigour to every muscle of the system. A few neat leather balls are all that are required, and a room of moderate size will afford sufficient space. Dumb-bells are somewhat cumbrous and inelegant.

Exfœtation (Latin *ex* and *fœtus*). Extra-uterine fœtation, or imperfect fœtation in some organ without the uterus. See *Eccyesis.*

Exfoliation (Latin *exfolio*, to cast the leaf). The separation of a piece of dead bone from the living substance; this is the result of disease: the thin leaf-like scales, or plates, in which the pieces of bone come away, have given occasion for the above name. See *Bone.*

Exhalations (Latin *exhalo*, to exhale or fly off). The vapour which arises from animal and vegetable bodies, marshy places, &c. Applied to the living body, it means the evaporation of a fluid through a membrane, as the lungs and skin; the former of which is computed to exhale in the course of 24 hours, from 16 to 20 ounces of fluid in the form of vapour. From the skin, an exhalation of watery fluid is also constantly going on in the form of what is called *insensible* perspiration; it is called *sensible* or felt, when a much greater quantity than usual passes through the pores, and is condensed on the surface. See *Perspiration, Respiration, Skin.*

Exhaustion. This is the state which naturally follows exertion; it may be either of the body generally, or of one or more of its organs, and it is more or less complete in proportion to the violence of the exercise which produces it, and of the bodily strength of the exerciser. It is the effect of failure of nervous energy, or of deficiency of organized materials fitted to support the requirements of the body. This latter is especially the case in the exhaustion of those debilitated by disease, or want of food or drink, or exposure to intense cold. Under the effects of passion, or excitement of any kind, persons will perform feats of strength, and completely use up, if we may so speak, their nervous energy, without being aware of it, until the stimulus is withdrawn, when they sink exhausted, and are quite incapable of further exertion until rest and nutriment have recruited their powers; and from such *occasional* exhaustions no serious mischief may accrue. But when the daily labours of life are such as produce them, it is plain that nature will in time rebel against such excessive task-work, and there will be organic disease and a debilitated state of the system which will render it impossible. It is the truest policy, therefore, not to overtask either the bodily or the mental powers; for the same results will follow a continued undue exercise of the mind also; for the mental faculties act by means of bodily organs, and the waste of physical energy is almost as great when a man thinks long and intensely, as when he strains his nerves and sinews in some laborious occupation. We would, therefore, simply warn our readers against habits and modes of life which necessitate either physical or mental exhaustion; too much stimulus of any kind leads to this, intemperate indulgence in the pleasures of sensuality, as well as in the enjoyments of intellect, or the toils of daily life. Let us not exhaust ourselves at all if we can help it; but certainly let us not do so in paudering to vicious and depraved appetites.

Exemphalos (Greek *ex* out, and *emphalos* umbilicus). Rupture at or near the umbilicus. See *Hernia*.

Exopthalmia (Greek *ex* out, and *opthalmos* the eye). A swelling of the bulb of the eye, sometimes called *Opthalmoptosis*, and sometimes *Ptosis bulbi oculi*. See *Eye*.

Exormia (Greek *ex* and *orme* impetuous). An old medical term synonymous with *Ecthyma* (which see).

Exosmosis (Greek *ex* and *osmon* impulsion). The property by which rarer fluids pass through membraneous substances out of a cavity into a denser fluid: this is sometimes called *Dehors impulsion;* compare *Endosmosis*.

Exostosis (Greek *ex*, and *osteon* a bone). An excrescence or morbid enlargement of a bone. Sir A. Cooper states that the disease may be an osseous deposit between the external surface of the bone and the internal surface of the *periosteum*, firmly adherent to both, in which case it is called *Periosteal:* or a similar formation originating in the medullary membrane, and cancellated structure of the bone, and hence termed *Medullary*. Then, too, this morbid growth may be either *Cartilaginous* or *Fungous*, according to its method of formation. See *Bone*.

Expectorants (Latin *expectore*, from, or out of, the breast). These are medicines for promoting the discharge of mucous or other matters from the trachea and its branches. *Expectorant Medicines* may generally be arranged under the following heads:—*Nauseating*, as Ammoniacum, Garlic, and Squill, which are most suitable for the aged and phlegmatic; *Stimulating*, as Horehound, which is best adapted for the young and irritable; *Antispasmodic*, as blistering substances, hot fomentations, footbaths, &c., most suitable for the plethoric and irritable, and those liable to spasmodic affections; *Irritating*, as fumes of Tobacco and acrid vapours, adapted for those past the period of growth, and those who have evident marks of torpor, in the lungs in particular, or in the system generally. As Expectorant medicines we chiefly use Ammoniacum Gum, dose, 10 to 30 grains; Antimony, various preparations, but chiefly the Wine, dose, 5 to 10 minims, with other medicines; Balsam of Tolu, 5 to 10 drops on sugar; Benzoin, Compound Tincture, about ½ a-drachm; Colchicum, Wine and Vinegar, dose 10 to 30 drops; Coltsfoot and Dulcamara, Decoction, 1 drachm to an ounce; Digitalis, Tincture, 20 minims. A two-fold action may be traced in these remedies: first they remove the constriction of the vessels by the relaxation caused by the nausea they excite; and by their stimulating after-action they restore the natural secretions, and so change an unhealthy for a healthy condition of the vessels.

The following formula of Expectorant Medicines may be recommended as safe and efficacious; for Mixture, take of Ipecacuanha Wine, 2 drachms, Syrup of Tolu, 4 drachms; Compound Tragacanth Powder, 2 drachms; Water sufficient to make 6 ounces: for a child, 1, for a grown person, 2 tablespoonsful every four hours; in the latter case, 2 drachms of Compound Tincture of Camphor may be added to the Mixture, and 2 drachms of Vinegar of Squills if the expectoration is difficult. For Pills, take Compound Squill Pill, and Compound Ipecacuanha Powder, of each, 1 drachm; mix, and make into 24 pills; one every four or six hours. For an Electuary, rub down Spermaceti, 1 ounce, with a few drops of Spirits of Wine; mix with an equal quantity of Powdered Gum Acacia; then add common Vinegar, and Syrup of Poppies, and Almond Oil, of each, ½ ounce; put the whole into a gallipot, and give a teaspoonful when the cough is troublesome; excellent for children, who will commonly take it eagerly on account of its sweetness.

Expectoration, Is, first, the act of discharging mucous or other matter from the lungs or trachea; and second, the substances so discharged. The term in its first meaning is synonymous with coughing, and need not further occupy our attention; but in its second, we find so many important considerations connected with the diagnosis of disease, that we must pause awhile to consider it. It is by the nature of the Expectoration that the physician is enabled to judge of the character and progress of the malady with which he has to contend, if this be *frothy* it indicates active Bronchitis, Catarrh, or Influenza; if *stringy*, and of a whitish or yellowish colour, the Bronchitis has become chronic, or spasmodic, or there may be Hooping-cough present or impending; if *purulent*, it may indicate the latter stages of Catarrh, or Influenza, especially if the sputa, or matter spat up, is mixed more or less with a tenacious mucus; genuine *pus*, capable of being poured from one vessel to another, indicates the bursting of a vomica on the lungs, or of the matter of the empyema having found its way into the bronchial passages; the yellow matter often expectorated in humeral asthma is not truly purulent, but to a large extent mucous. If *lumpy* there can be no mistake as to the nature of the disease; Pulmonary Consumption has fairly set in, and made considerable advances; there is sure to be a softening and breaking up of tubercles, where there are small yellowish or whitish lumps expectorated along with the clearer fluid on which they float, perfectly distinct. If *membraneous*, the sputa indicates imflammatory action of a chronic, most likely of a croupy character. If *stringy* and *rusty-coloured*, there is certainly Pneumonia; if *bloody*, there is Hemoptysis, either a blood vessel on the lungs has broken, or blood has oozed through the bronchial membrane, both symptoms of a very diseased state of the tissues, and indicative of great danger to the patient. If *offensive* and *putrid*, there may be gangrene of the lungs, but this is only a single sign, and not to be relied on alone. These are the chief distinctive characters which Expectoration assumes, and its increase or decrease in bulk or density, its varieties of tint and other particular changes, tell to the experienced eye of the doctor how the case progresses, and whether it is likely to terminate in convalescence or death.

Expiration (Latin *expiro* to breath). The act of expelling the air from the lungs. See *Breathing*, *Respiration*.

Exploration (Latin *exploro* to examine). Examination of the abdomen, chest, &c., with a view to ascertain the physical *signs* of disease, which, in this case, are not termed *symptoms*. This process may be conducted in different ways—for instance: the methods of exploring the abdomen are 1st, by *Inspection*, or ocular examination, by which size, form, and movements can be observed; 2d, by *Feeling*, or manual examination, used for ascertaining the degree of sensibility, the existence of a tumour; 3rd, *Percussion*, used for detecting the fluctuation, quantity, condition of the fluids within. (See *Auscultation*). A process for ascertaining the comparative size of the different parts of the chest is sometimes resorted to, and this we call *Mensuration*. The old physicians used, at times, to shake their patients' bodies, and note the sounds thereby produced, and this was termed *Succession;* but it is not practised now.

Expressed Oils. Are those which are obtained from bodies by means of pressure; such as Castor and Linseed, and some other Oils used medicinally, although the chief of these thus employed are *Essential Oils*, (which see).

Exsanguinity (Latin *ex* and, *sanguis* blood). A state in which there is a deficiency of blood. See *Anæmia*.

Extension (Latin *extendo*, to stretch out). The process resorted to in reducing *Dislocations*, (which see), and *Fractures*.

Extensor (same root). A term applied to a muscle which extends any part; its opposite is *Flexor*, (which see).

Extirpation (Latin *extirpo*, to eradicate). When used in surgery, signifies the removal of any part by the knife or ligature.

Extract (Latin *extraho*, to draw out). A form of preparation much employed in medical practice, the consistence varying from that of treacle to that of a solid pill mass. They are procured by the evaporation of watery or spirituous solutions of vegetables, and of the native juices obtained from fresh plants by expression. The London College arranges its Extracts in three divisions; 1st, we have *Watery* or *Simple*, including those of Aloes, Bark, Camomile, Colocynth, Dandelion, Gentian, Hops, Liquorice, Logwood, Opium, Poppies, Sarsaparilla, Stramonium; 2nd, *Spirituous* or *Resinous*. The strength of these depends greatly upon that of the spirit employed as the solvent; they contain all the ingredients of the watery extracts, except the gum; the chief of them are of Bark (resinous), of Colocynth (compound), of Jalap, and of Rhubarb; 3d, *Inspissated Juices*. These are obtained by expressing the juices of the fresh plants, and evaporating them in a hot bath, or in *vacuo*, as it is called, that is in space exhausted by an air pump; those chiefly used are of Aconite, Belladonna, Conium, Elaterum, Henbane, and Lettuce; these are nearly all narcotic preparations, and one curious fact respecting them is, that they contain a small proportion of mineral salt, such as Nitre, Muriate of Soda, and Potash. In order to give them a smooth and glossy appearance, manufacturers generally add to every pound about ½ a drachm of Gum, 1 drachm of Olive Oil, and 20 drops of Rectified Spirit. Simple Extracts should be used as fresh as possible; the Resinous will keep a long time good, but the other do not, unless carefully excluded from the air.

EXTRACTION (same root as the last). The operation of drawing *Teeth*, (which see), of removing a musket-ball, or any extraneous substance which has made its way into the body. With the more formidable of these operations of course the nurse or mother can have nothing to do; but the extraction of a thorn or a splinter, a pin or needle, or even a fish or crotchet hook, may be accomplished with a little careful manipulation: in the case of a thorn or splinter, its position may generally be ascertained by the black line which it shows through the skin, and the end may be taken hold of with the point of a sharp needle, if it does not project sufficiently to be drawn out with a pair of tweezers; if this cannot be accomplished, a warm poultice will sometimes effect the object, if not, a small abscess will quickly form, and the offending object will most likely come out with the discharge. A needle or a headless pin is more difficult of extraction, if it should have worked its way quite in; if its position can be traced near the surface, it may be worth while to make a clean cut with a lancet along the line indicated, and to take it out, otherwise it must be left to work its way out, which it will by-and-bye do, probably at some quite unexpected part. A fish or crotchet-hook is a difficult object to extract, on account of the barb; in most cases the shank will be left to take hold of, and by working this carefully about for a litte time the object may be effected; if not a cut must be made quite down to the barbed part of the hook, it can then be easily extracted; if the shank should be broken off the operation is rendered more difficult, and a surgeon had better be called in. The part from which any foreign object has been extracted is generally sore and inflamed; it should be rubbed with a little Olive Oil, and then have rags wet with Cold Water kept applied to it for some time; this with quiet, and perhaps a little gentle aperient, will generally set the patient right.

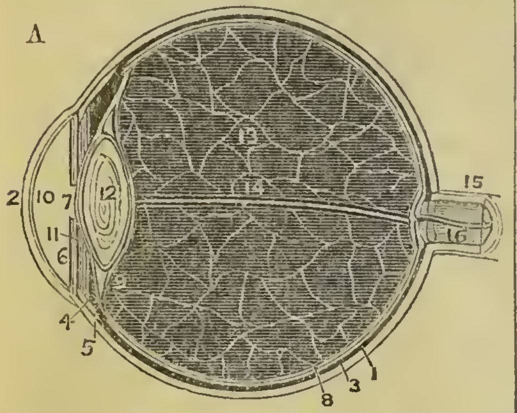
EXTRAVASATION (Latin *extra*, out of, and *vas*, a vessel). The passage or escape of fluids out of their proper vessels or channels; thus, Extravasation of Blood, is the pouring out of that fluid from the vein or artery into the cellular membrane, as is the case in a contusion, when there is generally discoloration of the surrounding parts; as is the case also in Pulmonary Apoplexy, in consequence of the rupture of one or more of the vessels of the lungs; and in Cerebral Apoplexy, caused by an outflowing from the vessels of the brain, which may be the result of accident or disease. See *Brain*, *Bruises*, *Pneumonia*, &c.

EXTROPIUM. Same as *Ectropium*, (which see) and *Eye*.

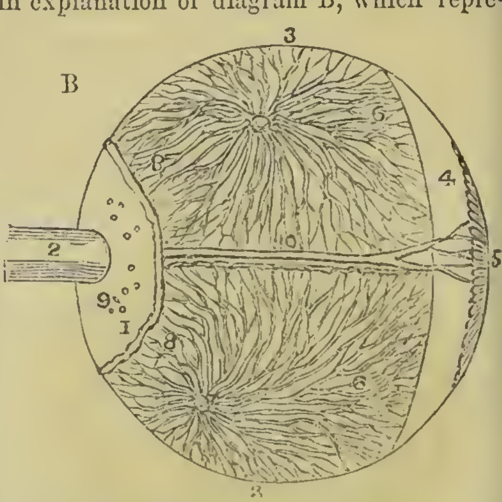
EXUDATION (Latin *exudo*, to flow). The flow of liquid from the surface of the skin, or membrane, as an ulcer, &c.

EYE. Few persons are aware how marvellously beautiful and complex a structure is the organ of vision; and it is somewhat difficult, within the limited space which we can give to the subject, for us to explain its various peculiarities of structure, so fully and clearly as that our readers may have a correct understanding thereof. Volumes have been devoted to a subject which we must compress into a few pages; and therefore, without pausing to speak of the many poetical things which have been said of the Eye, such as its being "the window of the soul," "the light of the body," "the queen of the senses," and so forth, we will at once proceed to our attempted description, in which we shall be greatly assisted by the excellent diagrams with which our artist has furnished us. We will speak, first, of the Eyeball, the optical instrument, independent of the muscles by which its various movements, and those of the lids, are affected; of the bony cavity, or orbit in which it is lodged and protected; and of the lachrymal apparatus by which it is provided with the fluids necessary for its lubrication.

The Eyeball, then, is a hollow globe, or small spherical chamber about 1 inch in diameter, having the segment of a smaller sphere engrafted on its front surface; this is what we see projecting like a bow window, as it were, when we take a side view of the face; it is, in fact, tho window of the chamber, and through it pass the rays of light which paint pictures on the retina within, of outward scenes and objects. In diagram A, which represents a longitudinal section of the Globe of the Eye, this projection is very distinctly marked, giving to the sphere a frontal elongation. This globe is composed of investing *tunics*, three in number, and of refracting media, called *humours*, of which there are also three. The lines encircling this globe represent the tunics by which the humours are kept in their proper place. No. 1 marks the course of the outer tunic called the sclerotic, which invests four-fifths of the globe, and gives it its peculiar form; it is a dense fibrous membrane, thicker behind than in front, where it presents a bevelled edge, into which fits like a watch-glass the *cornea* (2), which invests the projecting portion of the globe, and is composed of four layers, viz., the *conjunctiva*, or *cornea propria*, consisting of thin lamellæ, or scales, connected by an extremely fine areolar tissue; the *cornea elastica*—an elastic and excessively transparent membrane, which lines the inner surface of the last; and the *lining membrane* of this front vestibule, or bay window of the Eyeball, whose second tunic is formed by the *choroid* (3), represented by the dark line; the *ciliary ligament* (4), which developes from its inner surface the *ciliary processes*, and the *iris* (6), of which the opening at No. 7 represents the *pupil*. We shall go more into details presently as to the nature of these several constituents of the tunics and other parts of the Eye; at present we will keep to general outlines as represented in the diagram A. The third tunic, then, is the *retina* (8), which is carried forward to the *lens* (12), by the *zonula ciliaris*, a prolongation of its vascular layers passing along the front of the *Canal of Petit* (9), which entirely surrounds the lens. In the space marked 10, is contained the *aqueous humour;* 11 is the *posterior chamber;* 12 the *lens*, more convex behind than before, and enclosed in its proper capsule; 13 marks the inner area of the globe, filled with a thin membrane called the *hyaloid*, and containing the vitreous humour; 14 is the tubular sheath of the membrane, through which passes an artery connected with the capsule of the lens, and at the back of the eye, with the optic nerve, as represented at 16. Of this nerve, 15 marks the *neurileuma*, or sheath.

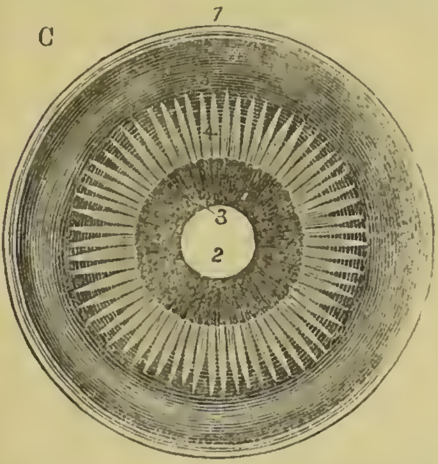


We will now proceed more into detail, in explanation of diagram B, which represents the Eyeball divested of its first tunic, so as to exhibit the second, with the beautiful distribution of the veins of the choroid called *venæ vorticosæ*, from the peculiar manner of their arrangement; this is the external layer of the choroid, which is connected with the ciliary ligament; next to it comes the *middle* or *arterial layer*, composed chiefly of the ramifications of minute arteries; it is called the *tunica Ruyschiana*, and is reflected towards its junction with the ciliary ligament, where it forms what are called the ciliary processes already spoken of. The internal layer of this tunic is called the *membrano pigmenti*, which is composed of several laminæ of minute six sided cells, which are arranged like a tessellated pavement, and contain granules of *pigmentum nigra*, or black paint; this is not, however, quite black, but of a deep chocolate colour. In diagram A, we see it in the dark line which encircles the globe, and thickens considerably towards the front. At the space marked 1, in diagram B, is part of the outer tunic, the sclerotic; 2 is the optic nerve communicating with the ball at the back; 3 3, distinguish the outline of the choroid coat; 4 is the ciliary ligament, a dense white

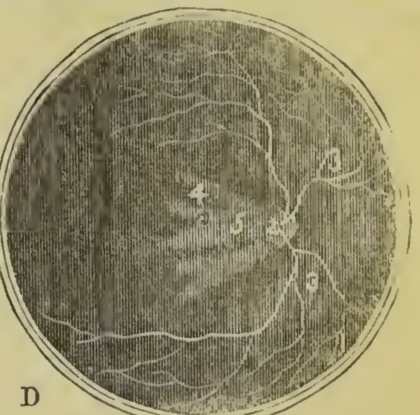


structure, which surrounds, like a broad ring, the circumference of the iris (5). This ligament serves as a bond of union between the external and middle tunics of the Eyeball, and serves to connect the cornea and sclerotica at their lines of junction with the iris and external layer of the choroid; 6 6, mark the *venæ vorticosæ;* and 7 7, the trunks of these veins at the point where they have pierced the sclerotica; 8 8, are the posterior ciliary veins, which enter the Eyeball in company with the posterior ciliary arteries, by piercing the sclerotica at 9; the course of one of the long ciliary nerves, accompanied by a vein, is marked by 10.

Our next diagram (C) represents a front segment of a transverse section of the Globe of the Eye, and again exhibits that beautiful arrangement of parts for which this organ is so remarkable: at No. 1 we see the divided edges of the three tissues, the *sclerotic* (outer), *choroid* (middle and dark), and *retina* (inner), which last is composed of three membraneous layers, the external being serous, the middle nervous, and the internal vascular. 2 is the *Pupil* of the Eye, that central spot, which enlarges or contracts, according as more or less light is required to be admitted; 3 is the *iris*, so called from iris, a rainbow, on account of its variety of colour in different individuals; it is composed of an anterior muscular layer, consisting of radiating fibres, as seen in the diagram, which converging from the centre towards the circumference, have the power of dilating the pupil; and also of circular fibres, which surrounding the pupil like a sphincter, performs the duty of contracting its area. The posterior, or hinder layer, is of a deep purple tint, and is hence named *uvea*, from its resemblance to a ripe grape; this is the surface of the iris presented to view in the above section. 4 represents the ciliary processes, before alluded to, and 5, the scalloped anterior border of the retina, that third tunic of the eye, of which we have already given some account.



We have hitherto been looking upon this wondrous little globe from without, let us now take a view of it from within, as represented in diagram D. This is a posterior segment of a transverse section of the ball: here again we see of course only the divided edges of the tunics on the three outer rings (1), from which extends the membrane covering the whole internal surface of the retina; 2 marks the entrance of the optic nerve—about which more will be said presently—with the vein known as the *anteria centralis retinæ* piercing its centre; 4 is the *foramen of Soemmering*, situated in the middle of the axis of the eye; this is a circular spot, surrounded by a yellow halo, called the *limbus luteus;* this halo is commonly obscured by a fold of the retina (5), as on the diagram before us; this foramen, which signifies an opening, has been found to exist only in animals which have the axes of the eyeballs parallel with each other, as man, the quadrumania, and some saurian reptiles; it is thought to give passage to a lymphatic vessel.



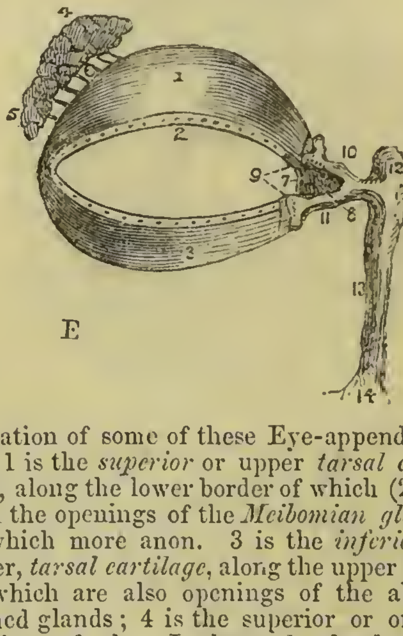
We have as yet said but little of the *Lens* or *crystalline humour*, marked 12 in diagram A, it is situated immediately behind the pupils, and surrounded by the ciliary processes which overlap its margin; it is less convex on the front than on the hinder surface, and is invested by a peculiarly transparent and elastic membrane called the *Capsule*, which contains a small quantity of fluid called the *liquor Morgani*, and is retained in its place by its attachment to the *zonula ciliaris*, already described as a prolongation of the vascular layer of the retina.

The lens consists of concentric layers formed upon a hard firm nucleus, and becoming softer as they tend to the outer surface; these concentric lamellæ are composed of minute parallel fibres united with each other by means of scalloped borders, the convexity of one body fitting into the concavity of the other.

Before leaving this part of our subject, we will give a brief summary of the *uses* of the several parts which we have been endeavouring to describe. The first tissue, the *sclerotic*, is simply one of protection; the *cornea*, is a medium for the transmission of light; the *choroid* supports the vessels, such as veins and arteries, by which the eye receives nutriment; and also, by its inner layer of *pigmentum nigrum*, absorbs all scattered rays, by which an image impressed on the *retina* might be confused. The *iris*, by its power of expansion and contraction, regulates the quantity of light admitted through the pupil; if it be thin, and the rays pass through its substance they are absorbed by the *uvea;* and if the power of that layer be insufficient, they are taken up by the black pigment of the *ciliary processes*. Where, as in Albinoes, there is an absence of the *pigmentum nigrum*, the rays of light traverse the iris and even the sclerotic, and so flood the eye with light that the sight is destroyed, except during the dimness of evening. Opticians are well aware of the absorbing power of dark colours, and take care to have a black lining to their instruments; but what man ever made an instrument like the eye, with its transparent laminated cornea, and various humours, so constituted and arranged that they refract the rays in such proportion as to produce a perfect image upon the retina, and convey such exact and vivid pictures of outward objects to the mind within, that sits enthroned, who shall say where?

When the body of the refracting medium is too great, owing to over-convexity of the cornea and lens, the image falls short of the retina, unless the object be brought very close, this is near-sight; when there is an opposite condition of things, so that the image is thrown beyond the nervous membrane, we have what is called far-sight. See *Sight*, *Spectacles*.

Of the various nerves, veins, and arteries which traverse the eye, we need not attempt a description, to some of the principal of them allusion has already been made; but to the *appendages* we must devote a little space. These are, first, the Eyebrows (*Supercilia*), two prominent arches of integument, covered more or less with thick short hairs, and forming the upper boundary of the orbits; their obvious utility is to shade the eyes from too vivid a light, and to protect them from particles of dust and moisture from the forehead; second, the Eyelids (*Palpebræ*), which have been well called the Curtains of the Eyes; when drawn open, they leave an elliptical space sufficiently large for the purposes of sight, and when closed, as in sleep, they effectually defend the delicate organs which they cover, from injury. If we inquire into the structure of these two valvular Eye-curtains, we find that they consist of integuments, muscles, cartilages, glands, and the mucous membrane called conjunctiva, which covers the whole of the anterior surface of the eye, and is reflected back so as to form the internal layer of the lids. In diagram E, we have a representation of some of these Eye-appendages. No. 1 is the *superior* or upper *tarsal cartilage*, along the lower border of which (2) are seen the openings of the *Meibomian glands*, of which more anon. 3 is the *inferior*, or lower, *tarsal cartilage*, along the upper edges of which are also openings of the above-named glands; 4 is the superior or orbital portion of the *Lachrymal gland*, from which come tears, and 5 is its inferior or palpebral portion; 6 represents the *Lachrymal ducts*, or channels through which the tears pass to the outer surface of the eye. 7 is the *Plica semilunaris*, containing a small plate of cartilage, which appears to be the rudiment of a third lid, such as is developed in some animals. 8 is the *Caruncula lachrymalis*, which is the source of the whitish secretion which so constantly collects in the corner of the eye; it is covered with minute hairs, which can sometimes be seen without the aid of a microscope. 9 is the *Puncta lachrymalis*,

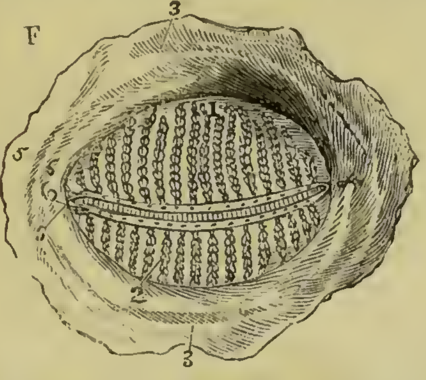


E

the point, or external commencement of the ducts, which terminate at the *lachrymal sac*, the position of which is marked by 12; as are the *superior* and *inferior lachrymal canals* by 10 and 11. The *nasal duct*, marked by 15, and 14 is its dilation with the lower meatus of the *Nose* (which see).

We now turn to diagram F, which represents the *Meibomian Glands* as seen on the inner sides of the Eyelids (1 and 2); the *Conjunctiva* is marked by 3, 3, and the apertures of the glands along each corner of the lids, by 4; the *Papillæ lachrymales* and the *Puncta lachrymalia* are distinguished by 5, 5, 6, 6, and the apertures of the ducts of the *Lachrymal Gland* by 7. On examining the inner aspect of the Eyelids, these Meibomian Glands can be distinctly seen, arranged like strings of pearls, about thirty, on the cartilage of the upper lid, and somewhat fewer in the lower, where also they are shorter than those above, as they correspond in length with the breadth of the cartilage. Each of these glands consists of a single lengthened follicle, or tube, into which a great number of small clustered glandular vesicles open; and from these tubes the secretion is poured out upon the margins of the lids, which, being thus kept constantly moist inside, are in a condition to lubricate and wash the surface of the cornea, which they do in the motion of winking.

F

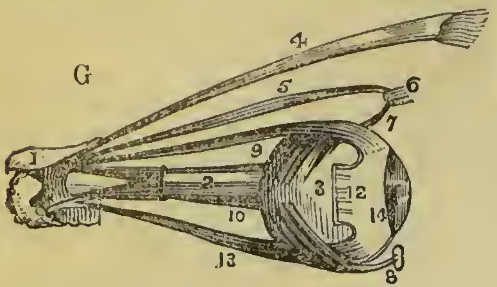


The Eye-lashes (*Cilia*) have now to be mentioned; they, too, are important organs of defence for the delicate surface of the eye, for whose curtains they form, as it were, a silken fringe. (For further particulars relating to the construction and powers of this organ see *Light*, *Sight*).

We have now to speak of the *Diseases of the Eye;* these are numerous, and sometimes very difficult of treatment, owing to the extreme susceptibility and delicacy of texture of the parts involved; they admit of classification thus: — 1st, Diseases of the Eye generally (see *Ophthalmia*) *;* of this oculists distinguish 10 varieties; 2nd, Diseases of the Eyelids, 16 varieties; 3rd, Diseases of the Conjunctiva, 2 varieties; 4th, Diseases of the Cornea and Chambers of the Aqueous Humours, 8 varieties, 1 of which has 4 subdivisions; 5th, Diseases of the Iris, Lens, Capsule, and Vitreous Humours, 9 varieties; 6th, Cataract, divided into true and false, the first having 4 varieties, one of which has 14 manifestations. and the other 5 varieties: then there is *Amaurosis*, complete and incomplete, the first with 3, and the second with 18 varieties. Who after this shall say, that an oculist has not something to learn, or wonder that scientific men of great ability devote their whole time and attention to a study of the Eye alone? The various operations which they are called on to perform, and those of the most difficult and delicate nature, are almost as numerous as the varieties of disease above enumerated; thus, for cataract we have couching, or depression, performed in two ways, one by puncture of the cornea, the other by tho removal of the opaque lens out of the axis of vision, by means of a needle; and extraction, in which this object is effected by division of the cornea, and laceration of the capsule. The operation for artificial pupil is performed in six different ways, and so on. Well, then, may volumes be written about the Eye; it is a small organ, but a large subject, and we may well hope to be excused, if we fail in giving a very comprehensive account thereof.

This wondrous globe that we have been attempting to describe, lies within its bony socket, or conical-shaped orbit, whose projecting edges, especially that above, whose line is marked by the Eyebrow, protect it from injury. Besides being, as it were, embedded in fat, it is slung, or suspended on a kind of membrane, and its various movements are effected by means of seven muscles, called *Recti* muscles; the position and office of which will be best understood by a reference to diagram G, which represents the Eyeball with its muscular appendages, as viewed from the outer side of the right orbit, which is entered through the *Sphenoid Bone* (1), by the *Optic Nerve* (2); this nerve passes, as we have already explained, to the globe of the Eye (3), of which it is the great organ of sensation; the upper muscle (4) is called the *Levator Palpebræ*, the Lifter of the Eyelids; 5 is called the *Superior Oblique*, from the direction in which it draws the Eyeball; we see its cartilaginous pulley (6), and the reflected portion passing downward to its point of connection with the ball, beyond which the *Inferior Oblique* has its bony origin; the point of which is marked by the little square knob. The other four muscles are called *Recti*, straight; the *Superior Rectus*, sometimes called the *Levator Oculi*, erector of the eyes, and sometimes *Superbus*, because its action gives an expression of pride; its opposite (13) is the *Inferior Rectus*, sometimes called *Deprimus oculi*, depressor of the eye, and *Humulis*, as giving an expression of humility; the *Rectus Internus* (10) is sometimes called *Adductor Oculi*, from its drawing the Eyeball towards the nose, and *Bibitorious*, a sort of punning name, in allusion to the cup, or orbit, towards which it directs the glance; and its opposite the *Rectus Externus* (11 and 12), the one showing its two heads of origin, and the other its termination; the intervening portion of muscle (having been removed) has the name of *Abductor Oculi*, because it turns the ball outwards; *Indignabundus* is another name for it, as giving an expression of scorn; in our diagram, the internal rectus passes behind the optic nerve, which partly conceals it; 14 marks the *tunica albigania*, or white tunic, formed by the expansion of the tendons of the four *Recti muscles*. We trust that the muscular machinery of the Eye will now be fully understood by our readers.

G



It must be evident, that we cannot give a specific account, with directions for treatment, of all the forms and manifestations of Eye disease, nor is it necessary; a few only of them, such as are most prevalent and open to domestic treatment, need be touched upon.

The Eyeball itself is liable to be affected by *Acute*, *Chronic*, *Purulent*, and *Strumous Opthalmia*, the first of which is confined to the conjunctiva, or outer-covering of the front of the eye; its chief symptoms are a smarting sensation, and a feeling like that caused by the presence of dust; there is also considerable stiffness, and the whites become tinged with red, owing to the veins being suffused; on a close examination, the red vessels may be distinctly traced, and it may be observed that they move with the surface, showing that the inflammation is but superficial.

Treatment. Warm bathing of the Eye, combined with an active mercurial treatment, should first be tried; if the habit of the patient is such as to bear this, 5 grains of Blue Pill at night, and a Saline or Black Draught in the morning, continued for three successive days, or alternate days, may be given; if not, the Mercury must be taken in a milder form, as in the Grey Powder, and combined with Rhubarb, say 3 grains of the former, and 8 or 10 of the latter, every other night; the diet should be low, and light excluded as much as possible from the inflamed organ. Should the warm bathing not produce a good effect, in a couple of days or so, use the following lotion: Wine of Opium, 1 drachm; Sulphate of Zinc, 8 grains; Acetate of Lead, 16 grains; Rose, or plain Distilled Water, 8 ounces; dip a piece of linen in this lotion, and bind it, not too tightly, over the eye, letting part of the fold hang down so as to cover it well; keep this moistened; should it be necessary to resort to other measures, drop into the eye, from a quill, or small glass tube, a Solution of Nitrate of Silver, the strength about 4 grains to the ounce of Distilled Water, 2 or 3 drops three times a day, and apply leeches. When this disease continues long, the inflammation extends deeper, and it becomes *chronic*, which has all the symptoms of the *acute* form of disease, except the feeling as of dust in the eyes; the latter of the above measures will generally reduce it, or should not the Nitrate of Silver drops succeed, use Wine of Opium alone in the same way, and a lotion made with Green Tea, and about one-sixth of its bulk of Brandy, or other strong spirit. If, in spite of these remedies, the veins of the lids begin to swell on the outside, showing that the inflammation is spreading, blisters should be applied behind the ears, and the system yet more reduced if it safely can. In this case there is a plan of treatment, which generally succeeds in giving relief, and it is really not so dangerous and formidable as it may seem. Let the lid of the affected eye be carefully closed, damp the outside with a sponge, then draw a stick of Lunar Caustic (Nitrate of Silver) gently and evenly across the moist surface in successive lines, taking care not to go over one part twice; suffer the application to dry without opening the lid, which in a few hours will begin to swell, and soon attain such a size as to cause total blindness; this may continue perhaps for a day or two, the cauterized surface during the time discharging a large quantity of serum; the swelling will then gradually subside, and in a few days more, with the help of a dressing of simple ointment, the skin will have resumed its ordinary appearance, and all symptoms of inflammation will probably be gone. Gold diggers and other colonists, with whom Opthalmia is not uncommon, and who cannot command professional aid, will find this an effectual and easily-applied remedy.

In this country the form of Opthalmia known as *purulent* does not often occur except in infants newly born; the *symptoms* are swelling and redness of the lids, which may be observed a few days after birth; a thick pus is secreted within, which exudes between the partly closed lids, and drying at the edges, glues them firmly together, so that there is great difficulty in getting them open to examine into the extent of the mischief behind these closed curtains; when by dint of warm water sponging we are enabled to draw the lids gently back with the fingers, we observe that the whole surface of the eye is of a bright scarlet colour, and much swollen. The *treatment* in this case must be energetic, or the sight will be lost by the sloughing of the cornea; Nitrate of Silver in the form of Ointment should be introduced between the lids without delay; this may be done by means of a silver bodkin, should not a surgeon's probe be attainable; the Citron Ointment of the shops, which is the *Unguentum Hydrargyri Nitratis* of the Pharmacopœia, may be used, if not too stale and discoloured; it must be rubbed down, or partly melted, with a little Oil to soften it, taking care to use no steel implement in the mixing. A form more to be depended on than this, however, is the following:—Rub down in a glass mortar, until reduced to a very fine powder, 10 grains of Nitrate of Silver, add to this 1 ounce of pure Lard and mix well, then drop in 10 drops of the Solution of Acetate of Lead (*Liquor Plumbi Acetatis*), and again rub until the whole is thoroughly incorporated; a piece of this about the size of a grain of wheat to be introduced, as above described; this is a powerful remedy, and should only be resorted to in domestic treatment where the case is desperate, and a surgeon cannot be procured. The *strumous* form of Opthalmia is occasionally met with in persons of all ages, but it more especially attacks weakly and scrofulous children who are under 8 or 10 years of age; a peculiar intolerance of light is one of its most marked *symptoms;* a spasmodic closure of the lids takes place whenever much light is presented to the eye; on forcing them open, the conjunctiva will generally be found universally inflamed, but sometimes only partially so; but that which especially distinguishes this form of Opthalmic disease is the presence of, it may be one, or two, or several, little bright red pustules, each terminating a vein of the same colour, and the parts on which they exist are the most inflamed. Local applications will do little or nothing for the cure of this disease: the treatment must be general and generous; the *cause* is usually obstructed or unhealthy secretions, and if these are rectified the effect will soon disappear. Attention must be first paid to the state of the *liver* and *kidneys*, if these are deficient in action—if there is anything wrong with the *bile* or the *urine*—administer the appropriate remedies. (See those heads.) After this administer tonics in combination with sedatives, say Quinine, and Digitalis; or if this affects the action of the heart too much, Conium; they may be given in the form of Pills, 1 grain of the first and $\frac{1}{3}$ of a grain of the second or third, three times a day. With some constitutions, the Iodide of Potassium acts best; therefore, if the above does not succeed, take thereof 2 scruples, Compound Essence of Sarsaparilla 4 drachms, Tincture of Digitalis, or Conium 1 drachm, and Cinnamon or Mint Water 8 ounces; it is sometimes advisable to add to this, Sweet Spirits of Nitre about a drachm. In obstinate cases, the pustules may be touched with Nitrate of Silver, but this should be left to a surgeon.

Either of the above forms of Opthalmia, especially the two latter, may result in *Ulceration of the Cornea*, which in its more dangerous form is caused by extensive inflammation of the cornea itself; in its less dangerous form by the little pustules already spoken of; in the latter case, the treatment should be like that of Strumous Opthalmia; in the former it cannot be too active and energetic, as there is little chance of saving the eye by other than the strongest methods: Calomel and Opium, Blisters, Leeches, and the free use of the Lancet will no doubt be employed by the medical man, and no other can detect the niceties of the case sufficiently well to treat it properly.

Rheumatic Inflammation of the Eye, has its seat in the middle or Sclerotic coat; it is characterized by intense pain, which becomes more severe towards night, when it is generally accompanied by fever, and constant aching of the bones of the orbit; in this case it may be seen that the inflammation is deeply-seated, by the immobility of the red veins, when the lids are moved about; the treatment here will be like that of Acute *Rheumatism*, (which see).

Inflammation of the Iris is characterized by intolerance of light, but not the spasmodic closure of the eyelids before mentioned; the whole coloured part of the eye loses its clearness, and sometimes has on it white or yellow spots; a pink zone invests the cornea, and seems to give a tinge to the whole front of the ball. This is a very rapid and violent form of Eye-disease, and bleeding, mercurials, and strong purgatives must be resorted to if they can possibly be borne; 2 grains of Calomel with a ¼ of a grain of Opium, given every six hours until soreness of the mouth is produced, and if it does not open the bowels freely, Black Draughts every morning, very low diet, and blisters behind the ears, are the orthodox remedies, and the best.

Of that opacity of the crystalline lens called *Cataract*, we have spoken under its proper head (which see); there is another disease which, without any such opacity, or paralysis of the nerves, produces blindness, and this is termed *Glaucoma*. It is characterised by an unusual dilation of the pupil, which contracts but sluggishly, and has generally a greenish-brown hazy appearance; this is not very amenable to medical treatment. Counter-irritants, such as Blisters, may be tried, with Mercurials and Iodide of Potassium, but there is little chance of preserving the sight, which has usually become impaired before the above symptoms declare the nature of the disease, which is often mistaken for Cataract; the mischief, in this case, seems to be deep in the vitreous humour, the cloudy appearance of which can only be seen when the eye is looked straight into.

Inflammation of the Choroid is known by its accompanying dull heavy pains; and by bulging and discoloration of the white portions; this, like *Dropsy of the Eye*, which occurs in the aqueous and vitreous humours, causing enlargement and loss of sight, cannot be treated by other than a skilful surgeon, and seldom by him with success. The aid of such must also be sought for Cataract of the Eye, the only cure for which is the entire removal of the ball, an operation by no means dangerous, and easily gone through by the aid of Chloroform. (See *Cataract*).

For *Amaurosis*, (see that head); for Near or Short-Sight, (see *Sight*)—(see also *Squinting*). It should be borne in mind that when Lead or Mercury, in any of their forms of combination, are applied to the eye for any length of time, they are likely to produce Opacity of the Cornea, and consequent dimness of vision, and even without this result, the white, by the use of Nitrate of Silver, may become permanently stained of an olive colour.

We have now to speak of those Eye affections which relate rather to the appendages than to the globe itself; although, from the intimate connexion existing between all parts of this complex organ, no one part can be morbidly affected, without the rest partaking, to some extent, in the mischief.

Styes are little inflammatory tumours which frequently make their appearance on the edges of the Eyelids of children, they rarely affect grown persons, and, although troublesome, are not at all dangerous locally, nor prejudicious to the general health; they run the same course as boils, which, in reality, they are; generally speaking, they require no medical treatment, but when very large and painful, a Hot Water Fomentation will prove beneficial; when once the matter has escaped, they heal very quickly, a simple dressing of Spermaceti Ointment is sometimes required, but not often.

The edges of the eyelids are sometimes very red and stiff, in consequence of the inflammation of the small follicles or ducts which open there; the best remedy is a little Red Precipitate Ointment rubbed into the roots of the lashes, when the lids are closed on retiring to rest; this may be repeated every night until no longer required. A little Grey Powder, combined with Rhubarb, should be given, and the patient kept quiet and somewhat low. When inflammation has been going on in the eyelids for a time, their insides when inverted, will often present a rough granular appearance; in this case they should be gently rubbed over with a smooth piece of Dry Sulphate of Copper; the lid should be kept open after the application until the eyeball is syringed with warm water, to remove from it any of the solution caused by the flow of tears acting on the sulphate; there will probably bo great smarting of the eye, and increased redness of the white portion, which must be suffered to subside before the application is repeated, which it will, most likely, have to be many times. Low diet, and Mercury with Rhubarb, as recommended in the last case, are also required in this. Sometimes the hairs on the lids grow inwards and cause great irritation of the balls; Collodion brushed over the lids will, as it dries, cause contraction of the skin, and so draw the hairs outward, but this is only a temporary relief, and the application must be frequently repeated; surgical aid must be sought for the case, which is called *Trichiasis.*

Entropium and *Extropium* are turning in and turning out of the edges of the Eyelids; in the first case the lashes rub against and inflame the ball; in the second the inside of the lid is exposed, and becomes sore and inflamed; only a skilful operator can effectually deal with these two forms of Eye disease, although some relief may be afforded in the former of them by the Collodion application above described. *Ptosis* is a dropping of the upper eyelids in consequence of palsy arising from disease of the nerve which supplies the Levator muscle; sometimes the dropping is partial, sometimes entire, so that the whole eye is covered; this is a symptom of organic disease, which may be of a trivial and temporary character, or extensive and permanent: no domestic treatment can be of any service in the case. Small *encysted tumours* and red spots called *nævi*, frequently appear about the Eyelids, and also little abscesses, the latter especially after erysipelas, small pox, or any other inflammatory diseases which affect the cellular membrane, which is very loose about the Eye. The latter may be pricked with a common lancet, when there is no doubt about their character; but the former should not be meddled with except by experienced hands. Diseased conditions of the apparatus for the conveyance of tears from the lachrymal sac to the nose, sometimes occur; only a surgeon can attempt to remove the obstructions, and remedy any defects which may be discoverable in the organs.

As to *Squinting*, *Optical Illusions*, or *Spectra*, *Near* and *Short Sight*, our readers will find full particulars in relation thereto, under their several heads. We have now gone through most of the diseases to which the Eye and its appendages are subject, in as full, and we trust satisfactory a manner, as our space would permit. A few remarks on the appearance of the Eye as symptomatic of disease, may be useful in conclusion.

A Blood-shot Eye may indicate either inflammation, or congestion, or extravasation of blood in the organ itself, or catarrh, or influenza, but measles especially.

Contracted Pupil, if it be not the result of local disease, shows that some serious mischief is going on in the brain; there may be compression, or watery effusion; this is not unfrequently the result of taking large doses of opium.

Dilated Pupil occurs in amaurosis, and several diseases of the brain; small doses of Opium will frequently produce this; and the outward application of Atropine, or Belladonna, will nearly always do so.

Intolerance of Light we have already spoken of as a symptom of Strumuous Opthalmia; in severe headaches, fevers and inflammation of the brain it is also met with.

Prominence of the Eyeballs may result from dropsy of the eye itself, but it is often symptomatic of some obscure disease, affecting the *Brain* or *Heart* (which see).

Smarting of the Eye occurs in acute Opthalmia, and in that stage of measles in which these organs are particularly affected.

Squinting, although commonly a chronic condition of the muscles of the eye, is, when it comes on in the course of active disease, indicative of mischief in the brain, which may terminate in *Apoplexy* (which see).

Watering of the Eyes is, when acute, symptomatic of Influenza; when chronic, of some obstruction to the flow of tears through the nasal duct.

Yellowness of the Whites of the Eyes precedes and accompanies Jaundice, and indicates an improper action of the *Liver*, (which see), and *Bile*.

Eye Bright. The plant formerly known as *Euphrasy* (which see).

F., or Ft. Abbreviations of the Latin word *fiat*, or *fiant*—let it, or them, be made; used in *Prescriptions* (which see).

Face Ague. A painful affection of the nerves of the face. See *Neuralgia*.

Face (Latin *facies*). The lower and front portion of the *Head* (which see). It consists of fourteen bones firmly joined together, except in the instance of the lower jaw-bone. The principal cavities are the orbits of the eyes, the opening for the passage of the tears into the nose, and the opening for the optic nerves. The nasal cavity in the skull is large; the nose being composed chiefly of cartilage, divided by thin vertical plates, pierced above with numerous holes for the passage of the olfactory nerves. (See *Nose*), also *Jaws*, *Teeth*, &c. There are several medical terms founded upon the Latin root *facies;* such as *F. Hippocratica*, the peculiar appearance of the face immediately before death, described by Hippocrates. (See *Countenance; F. rubra*, see *Gutta Rosaceæ* or Rosy Drop; also *Acne.*) Then we have *Facial*, belonging to the face; as the *Facial Angle*, an angle composed of two lines; one drawn in the direction of the basis of the skull, from the ear to the roots of the upper incisor-teeth, and the other from the latter point, touching the most projecting portion of the forehead; *Facial Nerve*, applied to the *portia dura* of the 7th pair, as the *Trifacial* is to the 5th pair. The *Facial Vein* is that which commences at the summit of the head and forehead. (See *Angular*, *Veins*.) There is another of these terms used by the French physicians—viz., *Face Grippée*. See *Physiognomy*.

FACTITIOUS (Latin *factito*, to practice). Anything made or produced by means of art, in opposition to the natural production; thus we apply the term to diseases produced wholly or in part by the patient (see *Feigned Diseases*); also to waters prepared artificially in imitation fo the natural ones of Cheltenham, &c.

FACULTY (Latin *facultas*). The power or ability by which any action is performed. The term is also applied to the whole body of professors of the medical art. See *Physician*, *Surgeon*, &c.

FÆCES (Latin, plural of *fæx*, dregs). The rejected residue of the food passed into the stomach after it has served the purposes of nutrition. (See *Excrements*.) According to Berzelius, the normal constituents of human fæces are as follows:—Water 73·3, Vegetable and Animal Remains, 7·0; Bile, 0·9; Albumen, 0·9; Peculiar Extractive Matter, 2·7; Salts, 1·2; Slimy Matter, consisting of Picromel, Peculiar Animal Matter, and Insoluble Residue, 14·0=100·0. This is the condition of the fæces when the health is perfect, and there is nothing very peculiar in the diet to render it otherwise; in diseases, great changes take place, not only in the proportions, but even in the ingredients of which the fæces are composed: by their peculiarities of substance, smell, and colour, the medical man is enabled in a great measure to judge of the nature and progress of the mischief going on within; therefore it is of importance that they should be preserved for his inspection; the following are a few of their most obvious indications.

Natural motions are of a gingerbread colour, slightly varying in tint and hue, and of tolerable solidity of consistence, although perfectly impressible. The smell is offensive, but has not that peculiar fetidity which is observed in some diseased conditions of the system. The evacuation should be daily, and at or near a certain hour; but a deviation from this rule is no proof of ill health, we have known persons, in a perfectly healthy state, who only went to stool once in two, three, or four days, and even a week; it depends greatly upon habit, but such a habit is not good. Children should be taught to go at a certain hour every day, and the habit of a daily evacuation of the bowels, once fixed, will probably remain through life, except when it is interfered with by sickness, or the failing powers which are often a consequence of old age.

Mucous evacuations have a semi-transparent, jelly-like appearance; they may be tinged with brown, green, or yellow, all indicating the presence of bile; or red with blood, when there is inflammation or congestion of the mucous membrane, as in mucous *Diarrhœa* and *Dysentery*.

Lymphatic evacuations have a rough, shreddy, or spotty appearance; there may be little irregular round specks, like dirty white of egg, scattered through the fæces, or long pieces like shreds of lymph or dingy-coloured parchment; in this case it is likely there may be acute inflammation of the mucous membrane of the intestines, the seat of which may be in any of the bowels, or merely the rectum. This, like the above, is a symptom of *Diarrhœa* and *Dysentery*.

Pus in the Fæces indicates either ulceration of the bowels, or the breaking of an internal abscess into the alimentary passages; if there is much of it, the latter is most likely the case. This is a dangerous symptom. (See *Abscess*, *Ulceration*.)

Bile in the Fæces indicates excessive action of the liver, the cause of which may be excessive irritation, or active congestion; in which case the colour is generally of a bright yellowish brown, but sometimes, especially in children, it is of a decided green colour: this too is often the case with grown persons, when the liver is just recovering from a torpid state and beginning to act violently; this is commonly the case, too, in hydrocephalus, when the colour is a peculiarly deep green. Bilious motions may, or may not, be loose, although they are generally so, from the bile acting as an irritant in the lining of the bowels.

Absence of Bile in the Fæces is shown by absence of colour; the motions are clayey, sometimes as pale as pipeclay, and ranging from that shade up to the natural hue, occasionally assuming a greyish tint; they vary in substance, and when liquid are usually frothy, and float upon water on account of the quantity of gas which they contain.

Loose Motions proceed from so many causes, that we cannot take them as clear indications of any particular diseases; they are always present where there is an irritated or inflamed state of the mucous membrane, as in *Diarrhœa*, in some stages of which they become altogether *Watery*; if, when in this state, they exhibit rice-like particles, they indicate *Asiatic Cholera* (which see), or the too powerful action of saline, or drastic purgatives.

Solid motions, when too much so, indicate *Constipation* (which see). *Offensive* motions occur in dyspepsia, especially those forms of it which are associated with hypochondriasis; the factor is excessive in low fevers, when the poison introduced into the system seems to render the whole of the solids and fluids thereof peculiarly liable to decomposition.

FAHRENHEIT. The inventor of the thermometer which bears his name, and which is generally used in medicine and the collateral sciences; his Christian names were Gabriel Daniel, and he was born at Danzig near the end of the seventeenth century; he was elected a fellow of the Royal Society of London in 1724, and died in 1740. See *Thermometer*.

FAINTING. This is a state of total or partial unconsciousness, occasioned by diminished action of the heart, causing a less rapid circulation of blood through the brain. The causes of it are various, and sometimes very peculiar, such as a particular smell; that of a rose for instance, has been known to occasion it; certain objects presented to the sight; surprise, joy, fear, or any sudden emotions; loss of blood, or anything which tends to debilitate the system by diminishing the vital energy.

The first sensation of fainting to the patient himself is generally a singing in the ears, then the sight becomes confused, and all the senses deadened; a clammy sweat breaks out over the person, the countenance becomes deadly pale, and the limbs refuse to support the weight of the body, which sinks to the earth as helpless and motionless as a corpse; indeed the condition so closely resembles that of death, that it is difficult to distinguish it therefrom. This is a complete faint; frequently the fits are only partial and very limited in duration; but whether so or not the best *treatment* is to place the patient in an horizontal position; free the face, neck, and upper part of the chest from all incumbrances; let the fresh air play freely upon them, and sprinkle the former with cold water; holding to the nostrils from time to time some volatile stimulant, such as Hartshorn or Ammonia; as soon as swallowing can be accomplished, administer about 30 drops of Spirits of Wine, or Sal Volatile, in Water. The after-treatment will of course depend on the cause.

As the first stage of some forms of Apoplexy and Paralysis is one of faintness, a little discrimination should be used in the administration of stimulants. Where the seizure, too, is in consequence of loss of blood, no violent efforts at restoration should for a time be made, as this state is necessary for the patient's safety. See *Syncope*.

FAITH. In medicines has much to do with their good effect, hence the most wondrous cures often effected by quack nostrums. Without faith in his skill and judgment, and, as a consequence, in the medicines he administers, the medical man has a most difficult game to play; it is that faith only which can induce a patient to go on day after day, month after month, nay, year after year, pursuing the same round of draughts and pills and mixtures, and assuring himself that he is all the better for them, while his medical attendant, knowing he can only charge for so much medicine sent in, continues the supply, although he is probably aware that little good can come of it. And this arises out of the absurd system of charging for medicines only. A patient grumbles at half-a-crown for a visit, and demands "stuff for his money," stuff he therefore has, far more than is necessary, and will continue to have, while he refuses to pay his doctor, as he does his lawyer, for *advice*. Faith in medicines, we say, is a good thing, for it gives them double efficacy, but an intelligent faith in the Family Doctor especially; the patient should believe, that whether he orders much or little, or no medicine at all, he is guided by the light of science, and the wisdom of experience. This is the faith we would have our readers cherish, and they will have a much better chance of being cured of those ailments which are curable, and of finding relief in those which are not, than if they took pills and potions by wholesale, and paid for their physic, as for their wine, by the hogshead.

FALCIFORM (Latin *falx* or *falcis*, a scythe, or sickle, and *forma*, likeness). Scythe-like; processes of the dura mater, called *Falx cerebri* and *F. cerebelli*, on account of their sickle-like curvature. See *Brain*.

FALLING SICKNESS. So called from the patient suddenly falling to the ground when attacked by it: *Caducus morbus* is the name by which it is sometimes distinguished, but it is more commonly known as *Epilepsy* (which see).

FALLOPIAN LIGAMENT and TUBES. The former of these is frequently called *Pourpart's Ligament*. It is connected with the latter, which were named after their discoverer, Gabriel Fallopius, an Italian anatomist of the 16th century. See *Ear*.

FAMES CANINA. Canine, or voracious appetite. See *Bulimia.*

FARINA (Latin *far* or *farris*, corn). Meal, vegetable flour, procured by grinding the seed of *Wheat* (which see), and other grain; hence we have the term *Farinaceæ* applied to articles of food generally which contain farinaceous matter, including many vegetable products, such as the potatoe, beans, peas, &c.

FARINACEOUS FOOD. Any article of diet prepared from flour containing farina, such as that of the *cerealia*, *legumina*, &c., in such a manner as to make it at the same time nourishing and easy of digestion. The term has been especially applied to a variety of preparations, said to be most suitable for children, invalids, and those of weak digestive powers; baked wheaten flour, finely sifted, appears to be the great staple of these preparations, which are, in the main, very wholesome and nutritious; some contain a proportion of sugar, and some an admixture of several kinds of meal, which is not, in all cases, desirable. Semola and Semolina are articles of this class, and in them there is a larger proportion of gluten, the nutrient principle, than in most others; rice and potato flour, in which there is a great deal of starch, are not so good; bean and pea meal often disagree with weak stomachs, nevertheless, a small proportion of these may be of service, mixed with wheaten and other flour. Hard's Farinaceous Food, consisting, we believe, of the finest flour of wheat, is unexceptionable, except on the score of price. The composition of the Revelenta Arabica and Axtra Mankaz, can scarcely be determined with sufficient accuracy to enable one to give an opinion of their merits as food for invalids; they appear to consist chiefly, if not wholly, of meal of some of the leguminous, or pea tribe of plants. On the whole, it is, perhaps, best, as it is certainly cheapest, to prepare this kind of food at home; there can be nothing better than highly baked wheat flour, finely sifted; should it be found to produce costiveness, a little barley-meal may be added, or it may be partly sweetened with Manna. It should be kept perfectly dry, and not exposed much to the air before it is used. See *Diet*, *Food.*

FAR SIGHTEDNESS. A state of vision which is most frequently observed in persons of advanced age. See *Presbyopia*, *Sight.*

FASCIA (Latin *fascis* a bundle). 1st, The name of a bandage; 2nd, of the aponeurotic expansion of a muscle, as *Fascia lata*, a name frequently given to the aponeurosis of the thigh. From the same root, comes *Fasciculus*, a little bundle or handful; thus we say, using the plural of the term, that a muscle consists of a *fasciculi* of fibres then again the fluke, an intestinal worm, is called *Fasciola Hepatica.* See *Vermes.*

FAT (Latin *adeps*). Solid animal oil that of the human species consists of three proximate principles, *stearine*, *margarine* and *oleine*, which at the temperature of the living animal body are fluid, but when after death, the temperature falls, the two former become solid. It may be asked why, if it be in a fluid state while we live, the fat does not obey the law of gravitation and sink to some dependent parts of the body? The answer to this is, that it is enclosed in spherical cells, which prevent its diffusion. The uses of fat are two-fold, first it forms soft pads or cushions for the various bones and organs to work upon without injuring each other; and, second, it constitutes a store of combustible material, by the help of which the animal heat is kept up. Thus we find that animals which hybernate, or pass the winter in sleep, although generally plump and in good condition when they retire to their retreats, come out thence thin and meagre. We hear of creatures which have been buried in snow, or otherwise deprived of the means of obtaining food, living upon their own fat, meaning that this internal store of nutriment served to azotize the blood and keep up the degree of heat necessary for the performance of the animal functions.

A certain amount of fat, then, appears to be a requisite of sound health, and doubtless it is so, although we frequently see persons who have little or none of it hearty and vigorous; as, on the other hand, we do those whose excessive obesity would lead us to suppose that they were far from a healthy condition, as indeed they are, although their physical powers may for a time be unimpaired, and their mental energies unclogged by the corporeal weight which they have to bear: very fat people are always bad subjects for disease, especially if it be of an inflammatory character, and it is in such that we look for apoplexy, and other sudden terminations of life. Very commonly fat accumulates in the body as persons advance in years, and those often who are thin in youth become stout in the full maturity or decline of life; this may be owing in a great degree to the diminished activity of the daily habits, both mental and bodily; restless, busy people seldom grow fat, nor do those of a hypochondriacal and cynical cast of mind; it is your easy-going, good-natured men and women, who "laugh and grow fat," in the merry twinkle of whose eye, and jovial chuckle, one reads of contentment and satisfaction with things as they are; but sometimes this obesity becomes a real disease, marring all the pleasures of life, preventing the performance of its duties, and shortening its duration; especially is this the case when it begins in childhood, or about the time of puberty, when there is frequently associated with it intellectual deficiency, and it is most desirable that efforts should be made to counteract as much as possible the tendency to increase fat. We cannot do better than quote the excellent remarks of Doctor Chambers on the measures to be adopted for this end:—"The first thing indicated in all cases is to cut off as far as possible, the supply of material. Fat, oil, and butter should be rigorously interdicted in the diet table. But all eatables contain some portion of oleaginous matter, and especially those most convenient to advise the use of for a lengthened period; and almost all are capable of a transformation into fat, when a small quantity of this substance is previously present. It is desirable, therefore, that the mass of food should lie in the stomach as short a time as possible, in order that at east a fatty fermentation may not be set up n it. Very light meals should be taken at imes most favourable to rapid digestion, and should consist of substances easy of olution and assimilation. To this end the ime of the meals should be fixed for an arly hour in the day, before exertion has endered the organs of nutrition languid and weak. Breakfast should consist of dry oast, or what is still better, sea-biscuit; nd if much active exercise is intended, a mall piece of lean meat. Dinner at one, n meat with the fat cut off, stale bread or iscuit, and some plain boiled macaroni, or iscuit pudding, by way of second course. Liquids should be taken, not at the meal, ut half-an-hour after, so as not to impede he action of the gastric juice upon the mass. Here should end the solid feeding of he day; no second dinner, or supper should ollow, nor, indeed, any more meals be taken itting down. A piece of biscuit and a glass f water can be taken standing up, if faintess is experienced; a cup of gruel, or roast pple, before going to bed.

"The smallest amount of nutriment conistent with the health of the individual can e found by experiment only; but we need ot fear that ten ounces of solid food a day s too little. It may be remarked, by the way, that it is often advisable to add a small llowance of malt liquor at dinner, as otherwise the craving of the appetite is less easily appeased. The beers to be avoided are, of course, the thick, sweet kinds; but that which is thoroughly fermented at a low temperature, in the Bavarian way, seems to contain very little injurious matter. I do not know that any advice concerning sleep is peculiarly applicable to obese persons, beyond what we should recommend to all classes of men. They are usually uneasy sleepers, and though lethargic, by no means averse to early rising.

"In cases where the fat is largely accumulated in the abdomen, it is very convenient for the patient to wear a band round the cavity, which may be tightened gradually. The support thus given to the abdominal muscles relieves the dragging sensations in the loins which many persons, whose viscera are heavy in proportion to their strength, experience. It enables exercise to be taken with more facility, and appears also, by pressure, to afford some assistance to the absorption of fat. The above remarks will apply equally to all forms of obesity; the abstinence recommended can be borne even by the aged, and only comfort be experienced.

"As respects exercise, however, a distinction requires to be made. The young and vigorous, whose obesity does not prevent the use of their legs, cannot employ them more usefully than in walking as long as they are able. The greater number of hours per day that can be devoted to this exercise, the quicker will be the diminution of bulk. But as riding, by the gentle shaking of the abdomen, excites the secretions of the digestive organs more, it should, where practicable, be employed in addition. Where freedom of motion has once been gained, rowing, shooting,—any, or all, of the forms of British gymnastics, should be adopted as regular habits.

"Purgatives I have generally found not needed in the plethoric form; the bowels act usually once or twice in the day. But in the asthenic obesity of *old people*, where the abdominal walls are weakened by long pressure of an unnatural weight, it is necessary to employ them.

"But there is one class of medicines so peculiarly applicable to *all* cases of obesity, that I think a trial should never be omitted. The chemical affinity of alkalies for fat, point them out as appropriate alternatives in this complaint, and experience proves that they are suitable to the state of the digestive organs. The most eligible one is *Liquor Potassæ*, and it may be administered in much larger quantities than any other. If given in milk and water, we may safely commence with ½ a-drachm, and raise the dose to 1 drachm and 1½ three times a day. The milk covers the taste of the Potash better than any other vehicle. It has truly the advantage of saponifying a portion of the remedy, but there is no evidence to prove that its efficacy is thereby endangered; indeed, soap itself has been strongly recommended."

It is a foolish habit with some to take large quantities of vinegar with the view of checking a real or supposed tendency to grow fat; they cannot do this without injury to the digestive organs, the effects of which will be felt in after years, if not at the time.

With regard to animal fat as an article of food, we may observe that it is generally difficult of digestion, and therefore those who lead sedentary lives, especially in warm climates, should partake of it but sparingly. In very cold climates large quantities of it may be taken, there indeed this kind of food is required, to keep up the supply of animal heat in the system; hence to the Greenlander train oil and whale's blubber are in some degree necessaries of life, while to the European, fatty food of a far more palatable nature, if taken in excess, increases the secretion of bile, and causes disorder of the digestive functions generally.

The fat of deer, of vipers, and various other animals was formerly used in the treatment of diseases, and in some cases of irritability of the membrane of the stomach, and low inflamation, such food is likely to be serviceable. Externally, fat is largely employed, and with great advantage. See *Adeps.*

Farcimen, or Farcy. The first of these terms is the name given by Sauvages to the equine species of scrofula, which, at the present day, is more commonly known by the last, or by *Glanders* (which see).

Fard is the French term for rouge, and other paints used for the face. See *Cosmetics.*

Fatuity. Foolishness, weakness of mind. See *Idiotcy*, *Moria.*

Fauces (plural of the Latin *faux* or *faucis*, the gullet). This is the gorge or back of the mouth, being the space which lies between the uvula and arches of the palate above, and the root of the tongue and epiglottis below. See *Throat.*

Fausses Eaux (French for False Waters). Water discharged from the uterus during pregnancy, and attributed by some to the transudation of the *liquor amnii* through the tissue of the membrane. See *Pregnancy.*

Favus (a honeycomb). A term applied to a peculiar skin disease which is developed in the shape of yellow cup-like scabs in which grow minute fungi; these are generally on the head, but sometimes elsewhere. See *Porrigo*, or *Scald Head.*

Famine (from the Latin *fames*). Destitution; scarcity of food. See *Starvation.*

Fasting. Abstinence from food either voluntary or involuntary; frequently practised by religious persons as a means of subduing the carnal passions and appetites, and bringing the body into subjection to the requirements of a holy life: it is not our province to enquire whether this practice is congenial with the true spirit of Christianity or not; we have to do with its effect upon the bodily health only, and under this head may say that as we nearly always eat too much, an occasional fast operates beneficially, by giving the digestive organs time to recover from the effects of over-labour. See *Abstinence.*

Fear. This is a state or condition of the mind, which renders the treatment of disease especially difficult; it should, therefore, be a great object with parents and nurses, and all who are in any way concerned about children and sick persons, to avoid exciting these strong mental emotions, whose depressing influence may render nugatory all the remedial efforts of the most skilful practitioners. It is well known that contagious and epidemic disease never spreads so rapidly, and is attended with such fatal results, as among a community affected by fear; many a strong man, whose physical energy would have enabled him to maintain a severe struggle with disease, and, probably, come off victorious, overcome by a craven fear, has laid him down and died; while his far weaker brother has striven manfully with the destroyer, and passed safely through the same dangers, because he had faith to support him—faith in the guardianship of Providence, and in the human means adopted for his restoration to health.

Always then endeavour to inspire the sick with such a faith, and to fill their hearts with that perfect ease which casteth out fear; let all that is done for them be done with gentleness and kindness; speak to them hopeful and cheering words and without concealing from them any danger with which they may be threatened, and the necessity they are under to be prepared for Death and Eternity; encourage them by all means to have confidence in their medical adviser, and the means adopted for their relief. On the youthful mind, fear operates most powerfully, and the more so, perhaps, from being vague and undefined.

Naughty children are sometimes threatened with a visitation of "the Doctor," whose name is associated with all things nauseous and horrible; so that when it is really necessary for him to visit his little patients, he finds them in a perfect paroxysm of terror, with flushed cheeks, quickened pulses, unwillingness, if not incapacity, to answer the questions put them, and other disturbances of the natural order of things, which, whether they be the result of disease or of fear, it is often impossible for the much-dreaded doctor to determine.

On the other hand, it cannot be denied that sudden fright and terror have sometimes had a salutary effect in rousing the system to some mighty effort, by which it has been enabled to throw off the shackles of long-standing disease. This has been especially observed in paralytic cases, and some greatly depressed states of the nervous system; but as a general rule, the operation of fear is altogether mischievous, and we would counsel our readers to banish it as much as possible from the sick room and the nursery.

FEBRIFUGE (Latin *febris*, a fever, and *fugo*, to dispel). Any medicinal agent employed for the reduction of fever. We more commonly speak of this class of medicines now as *Antiphlogistics* (which see). *Diaphoretics* and *Refrigerents* are also Febrifuges; and so are *Tonics* at certain stages of *Fevers* (which see). Arsenic, Fowler's Solution; Antimonial Powder and Tartarized Antimony; Ammonia, Acetated Liquor and Muriate of; Peruvian Bark, and Quinine; Ipecacuanha; Nitrate of Potash; Nitrous and Sulphuric Ether: these are some of the principal Febrifuges now employed. Particulars of their nature and doses will be found under their several heads. The following will be found good formulas for Febrifuge Mixtures.—Take of Carbonate of Soda, or Potash, 2 drachms; Sweet Spirits of Nitre, 3 drachms; Syrup, 6 drachms; Water, sufficient for 6 ounces; pour out two tablespoonsful in a tumbler, and add 15 grains of Citric or Tartaric Acid, or a tablespoonful of Lemon Juice; drink while effervescing. Or take of Nitrate of Potash, 1 drachm; Sweet Spirits of Nitre, 3 drachms; Tincture of Hyoscyamus, 2 drachms; Liquor of Acetate of Ammonia, 1 ounce; Camphor Mixture, sufficient to make 8 ounces: take a tablespoonful every four hours: from 10 to 15 drops of Antimonial or Ipecacuanha Wine to each dose will make it act more energetically, and this additition is especially to be recommended when a cough is present. Anything which excites perspiration is useful as a Febrifuge; hence warm diluent drinks, and mustard foot-baths may be here mentioned.

FEBRIS (Latin *ferveo* or *ferbeo*, to be hot). Applied to a class of diseases characterised by increased heat. (See *Fever*), of which a slight attack is called *Febricula*.

FECULA (Latin *fæcula*). This is a principle which appears to be universally diffused throughout the vegetable kingdom (see *Farina*, *Starch*). The term was originally applied to *any* substance derived by spontaneous subsidence from a liquid; afterwards its application was restricted to starch, which is deposited by agitating the flour of wheat, or other grain, in water; and, lastly, we understand by the term, that vegetable principle, from whatever plant derived, which, like starch, is insoluble in cold, but perfectly soluble in boiling water, with which it forms a gelatinous solution.

FECUNDATION (Latin *fecundo*, to make fruitful). The effect of the vivifying fluid upon the germ or ovum which in its fecundated state is termed the *Embryo* (which see), also *Generation*, *Impregnation*.

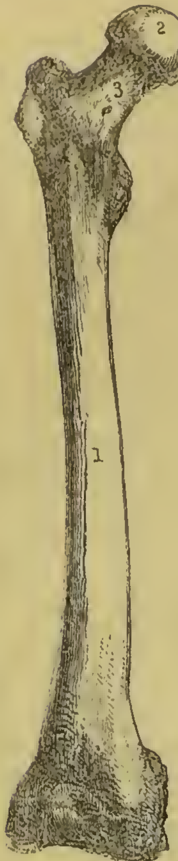
FEIGNED DISEASES. These may be pretended affections, local or general, which have no real existence; or such as are intentionally induced. Abdominal tumours, animals in the stomach, are of this class of diseases, which may be distinguished as—1st, those which are strictly Fictitious; 2nd, Exaggerated; 3rd, Factitious, produced by the patient; and 4th, Aggravated, originating without the patient's concurrence, but for some purpose artificially increased. Diseases are often feigned for the sake of exciting compassion, or to escape the performance of some unpleasant duty, and so well feigned that it is difficult to detect the cheat.

FEL BOVINUM. The Latin for *Ox Gall* (which see). *Fel Flua Passio* was an ancient name for *Cholera* (which see).

FELON. A malignant whitlow, in which the effusion presses on the periosteum (see *Whitlow*).

FEMORIS (Latin for the thigh). Hence we have *os femoris*, the thigh bone, which is the longest bone of the human skeleton; also *Femoral Artery*, the name given to the external iliac artery, immediately after it has emerged from under the crural arch; the term *Femoral* is also applied to the crural vein, which is a continuation of the Popliteal. See *Artery*, *Veins*.

The following cut represents the right Femur, seen in its anterior aspect; 1 is the shaft, 2 the head, 3 the neck. See *Thigh.*



Fenestra (Latin for a window). An aperture; hence the terms *F. ovalis* and *F. rotunda* respectively applied to the oval and round apertures of the Ear, sometimes called *Foramen ovale* and *F. rotundum.* See *Ear.*

Fermentation. (Latin *fermentatio*). A spontaneous change which takes place in animal or vegetable substances reduced to a moist or liquid state by water. Fermentations are of four kinds, viz.:—1st, the *Saccharine*, when sugar is the result of the change, as in that of starch; 2nd, the *Pannary* or *Vinous*, as that of flour, forming bread; or that of the grape and other juices, forming wine, and evolving alcohol; 3rd, the *Acetous*, when the result is acetic acid, or vinegar; and, 4th, the *Putrefactive*, commonly that of animal substances giving rise to various fetid products, and evolving ammonia.

Fennel, Sweet. A plant common on chalky cliffs in the southern parts of England, which has leaves cut into hair-like segments, yellow flowers, and glaucous stems; botanical name, *Fœniculum Vulgaris;* it is valued chiefly for the aromatic and stimulant quality of its leaves and seeds, which are also diuretic, and are useful in flatulency; the latter, and the oil extracted from them, are chiefly used; the dose of the Bruised Seeds is from 1 scruple to 3; of the Oil 2 or 3 drops; but it is generally taken in combination with other aromatics.

Fermented Liquors. These are beverages which have undergone the process of alcoholic fermentation; they may also be considered as the natural products of hot climates, from the readiness with which the vegetable juices ferment in a high temperature. It is clear from ancient records, that such liquors have been used from the earliest periods; and no doubt abused greatly, as they are at the present time, and as all the good gifts of God are liable to be. The liquors of this class (chiefly in use now) are the various Foreign wines, mostly prepared from the juice of the grape; British or Home-made Wines, of Grape, Gooseberry, and other juices, mostly rendered fermentable by the addition of sugar; Cyder and Perry, the fermented juice of the apple and pear; and Malt Liquors, having for their bases the saccharine principle of several kinds of grain, but chiefly Barley. See *Ale and Beer*, *Beverages*, *Drinks*, &c.

Fermentum (Latin *ferveo* to work). Balm or yeast; or any substance which possesses the power of commencing fermentation.

Fenugreek. The *Trigonella Fœnum-Græcum;* a plant of the natural order *Leguminosæ*, found chiefly in the south of Europe; it is used externally in cataplasms, and internally in dysentery and diarrhœa; but not now to any great extent.

Fern, Male (scientific name *Aspidium Filis Mas*). A common native plant belonging to the natural order *Filicales*, chiefly used as a remedy for tape-worm; and, until lately, too much neglected, for it is an excellent anthelmintic, equal, if not superior, to the much-vaunted *Kousso*. We give a cut of the plant, but there is so great a similarity in the growth of many British Ferns, that only a botanist could be sure of the species. The rhizoma or root, which is the part of the plant principally used, should be collected between the end of May and middle of September, cleared of root fibres, decayed parts, and earth, but not washed: dry quickly and thoroughly in the open air, in a shady place: powder those parts alone which are greenish internally, and keep in well stopped bottles in a dry place. The dose of this Powder is from 1 to 3 drachms: it should be given on an empty stomach, and followed, in the course of two or three hours, by an aperient; Castor Oil is, perhaps, the best. There is an Oil of Male Fern, obtained by evaporating an Ethereal Tincture of the buds or roots, and this is the pleasantest and most convenient form of administration. It may be taken thus:—½ a drachm mixed with 2 ounces of Mucilage: half at bed-time, the rest in the morning, with an ounce of Castor Oil 3 or 4 hours after the second dose. We have known several large worms completely expelled by this remedy. A Decoction of the fresh root or buds is also effectual: dose about 4 ounces; of the Ethereal Tincture from one to 2 drachms may be given; and of the Extract from 10 to 30 grains. See *Anthelmintics*, *Vermifuges*.

Ferro-cyanic Acid. A compound of Cyanogen, Metallic Iron, and Oxygen. It has been called *Ferruretted Chyazic Acid;* it contains the elements of Hydrocyanic or Prussic Acid, but differs from it in its properties. Its salts, formerly called Triple Prussiates, are now termed *Ferro-cyanites*, of which Prussian Blue is one of the most familiar examples.

Ferrum (Latin for *Iron* (which see). The terms *Ferri fila*, iron wire; *F. ramenta*, iron filings; *F. rubigo*, rust or carbonate of iron; *F. sulphus*, *F. ammoniatum*, and *F. tartarizatum*, and other combinations of the Latin root, will be frequently met with in pharmaceutical and chemical works

Ferula Assafœtida. The scientific name of the umbelliferous plant yielding the gum called *Assafœtida* (which see).

Ferula Persica. The stinking Giant Fennel, a native of Persia, thought by some to yield the gum *Sagapenum*.

Fetor. A bad odour of any kind, resulting from putrefaction, decomposition, or fermentation; it may be developed either in the internal or external parts of the body, and thrown out in the various excreting processes. A very peculiar fetor is diffused from the breath and body of one under the influence of putrid fever and other malignant diseases; and from mercurial salivation arises what may be immediately detected as the mercurial fetor. See *Chlorine*, *Disinfectants*, *Mercury*.

Feu Volage (French for flying fire). A name given by the medical writers of France to one of the forms of *Erythema* (which see).

Fever (Latin *febris*, which see). The characteristic marks of Fever are an increase of heat, an accelerated pulse, a foul tongue; often cold chills and shivering, head-ache, sore throat, great thirst, and an impaired stato of the functions generally.

The *causes* are various; among them may be named exposure to cold, heat, or wet, fatigue, long-continued watching, or mental anxiety, intemperance, unwholesome or insufficient food, breathing impure air, and all the bad local influences to which the lower classes, especially of large cities, are too often exposed, and the excesses and irregularities to which these classes are addicted. Most of the forms of Fever are epidemic, and their prevalence at or after periods of scarcity and privation, of unusual heat, or excessive moisture, render it impossible to doubt that there are certain states of the atmosphere, and conditions of the system, which render the latter peculiarly predisposed to febrific influence; and this is the case with all epidemic diseases, for many of which we look for an increase at particular times and seasons; thus, in the spring, measles prevail generally to a greater extent than at any other part of the year; scarlet fever is most common in the autumn; and typhus towards the close of summer, which, especially if it be cold and wet, is the season most productive of all kinds of fever. Small-pox again is known to be so much more prevalent at some periods than others, that its propagation is evidently influenced by atmospheric causes, and so it is with any kind of Fever which, if it once appears under circumstances favourable to its development, spreads with alarming rapidity. Such is the case in the densely populated and ill-ventilated dwellings of the poor, in hospitals, and sick rooms, where numbers are necessarily confined in a limited space: among those classes who pay due attention to the rules of cleanliness, whose dwellings are airy and commodious, and diet wholesome and regular, we do not find that febrile diseases prevail much as epidemics, unless they live in localities where the air is rendered impure by that terrestrial poison, which we term *malaria*—bad air—the result of vegetable or animal decomposition; and, even, when it does effect such persons, the diseases do not commonly assume so virulent a form, and their progress is far more easily arrested, than under the circumstances first indicated. Contagion and infection, both of these perform their part in the propagation of Fever, and many secret, and often unsuspected influences, are at work to make them more certain and widely destructive in their effects; for instance, the effluvia or exhalations of the human body, not only in disease, but in a state of health, may, by concentration in a confined space, become so virulent as to produce it; and the breath of a sick person, or an emission of poisonous gas from an open drain or cesspool, or any memphitic vapours floating upon the atmosphere, and entering into the circulation, may cause Fever, one of those efforts of nature to rid herself of deleterious matter, which if suffered to remain would cause organic disease; and this effort is more or less severe, according to the strength of the enemy to be expelled, and the vigour of the patient's system.

Fevers may be either *Idiopathic*, that is of the general system, not depending upon local disease; or *Sympathetic*, or as it is sometimes termed *Symptomatic;* which is a secondary affection, resulting from local disease, such is the inflammatory form; there is also what is called a *remote* effect, viz., the Hectic Fever. Then, again, they are distinguished as 1st, *Continued*, which includes the ordinary Fever of this climate, which in its active stage is sometimes attended with bilious vomiting, and diarrhœa; then, in some cases becomes typhoid, and lastly, assumes the slow nervous form. Under this head, too, must be classed the terrible Typhus or Malignant Fever, sometimes also called the Camp, Hospital, Gaol, or Prison Fever, of which, as of the others, we shall have to speak more at large presently. 2nd, *Intermittent*, or *Ague*, (which see). 3rd, *Remittent*, having irregular periods of remission and exacerbation, instead of distinct intervals and paroxysms, between which the patient is commonly well enough to go about his ordinary occupations. We also speak of *Eruptive* fever, meaning those that throw out a rash or eruption, such as measles and small pox, and distinguish the different kinds by several other names, as Gastric Fever, a term first applied to the common continued sort, when attended by unusual gastric derangement; this has been termed the Choleric and Mesenteric Fever; Hay Fever, or Hay Asthma *(Catarrhus Æstivus)*, and Hectic; Habitual, or Protracted Fever; Child-bed, Peritoneal or Puerperal Fever, the epidemic disease of lying-in women; Yellow, Kindal's, Bilious, Remittent, or Balam Fevers, (see *Bile*.) Many other distinctive terms applied to certain Fevers might be adduced, but it would answer no useful purpose to give the names of them here. We now proceed to give an account of the most common forms of febritic diseases, confining ourselves to the Idiopathic or true Fevers, as the Sympathetic are spoken of under the heads of the various diseases of which they are the symptomatic accompaniments. 1st, then, of the Continued Fevers, we have the simple or ephemeral form, whose precise *symptoms* are usually hot skin, head-ache, frequent pulse, furred tongue, disagreeable taste in the mouth, pains in the back and loins, shivering, and loss of appetite; there is not commonly much thirst, nor are the symptoms very severe, nor the fever of long duration. A mild diaphoretic *treatment* is all that is required; this will bring on, if it does not come naturally, a profuse perspiration in the course of a day or two, which relieves the system, and leaves the patient only a little weakened, with, perhaps, a slight cough, and running at the nose. This is generally the result of a cold, caught by sitting in a draught, or exposure to wet, or of contagion, the disease assuming an epidemic character, and running into *Influenza* (which see), or the complicated Continued Fever called *Typhus*, and other names as already mentioned. In this, we have the above symptoms in a much greater degree of intensity, and others, which vary considerably in the different stages of the disease. Of these stages there are three pretty distinctly marked: 1st, the Premonitory, or Incipient stage, in which there is commonly restlessness, loss of appetite, a pale, shrunken, anxious countenance, an unpleasant breath, a furred tongue, which, when put out for inspection, indicates by its tremulousness the weak state of the muscles generally. Frequently an attack of this disease is so insidious that the patient is scarcely aware of its first approaches; there is, perhaps, languor and an uneasy feeling, which is attributed to indigestion; but these symptoms should always be viewed with suspicion, especially if there is typhus in the neighbourhood. The second stage is that of Re-action, in which the febrile symptoms become stronger and more marked, the heat of the skin is greater, the pulse quicker, especially towards night; there is more thirst, head-ache, flushing of the face, and throbbing of the arteries of the head, suffusion of the veins of the eyes, and a tendency to delirium, all showing increased action in the cerebral circulation, which is likely to lead to congestion or inflammation, it may be of the brain, lungs, or bowels; in the first case the delirium will run high, and there will be great disturbance of the nervous system, and consequently of the functions generally; in the second there will be rapid and difficult breathing, with cough and the other symptoms of pulmonary inflamation; in the third there will be diarrhœa and flatulency, with first yellow, then black, and ultimately bloody motions, the result of hæmorrhage, which, if severe, will carry off the patient rapidly. In this stage of the Fever, as it progresses, we see frequently an eruption of bluish red spots on the skin, caused most likely by the rupture of the smaller vessels, and now, too, the tongue becomes coated with a yellowish fur, which first is dry and brown down the middle, and then is gradually overspread by a hard dark coating. This brings us to the third, or Typhoid, stage of the disease, in which the patient is completely subdued, his muscular strength is gone, his senses no longer serve him at all, or do so in a very imperfect manner, and his mind is incapable of any connection of thoughts or ideas; the fæces pass involuntarily, and the highly coloured urine either dribbles out in small quantities, or is retained altogether; the pulse, although frequent, becomes more and more feeble; a brown fur, called *sordes*, collects about the teeth and lips; and the hurried irregular respiration, shows that the last struggle with the destroyer has commenced; soon the fingers begin to twitch nervously, and to pick at the bed-clothes, and the body, as if obeying some law of gravitation, has a singular tendency to hitch down to the bottom of the bed; the eyes, are probably wide open, and so remain day and night, but there is no speculation in them; then mucus collects in the throat and air-tubes, causing the sound known as the "death rattles;" and the patient dies of suffocation, one of the many victims of Typhus Fever, unless he should, by the aid of a good constitution and a skilful physician, under God's providence, be enabled to escape this great peril. In that case, he will, after lying for some days in an apparently hopeless state, experience a mitigation of his severe symptoms; refreshing sleep will once more close his aching eyelids; a profuse perspiration will break out all over his hot parched skin; his breathing will become less hurried and difficult; the convulsive twitchings will cease, and he will lie calm and quiet—in a state of utter prostration, it is true, but so easy, that his condition, compared with what it was only a few hours since, will seem like that of one in eternal rest. This is a very critical period of the disease, requiring, perhaps, more careful and judicious treatment than any other: the all but extinct spark of life has shot up into a feeble blaze, and a very little gust will suffice to quench it utterly; it must be carefully guarded and nourished, until it grows brighter and stronger, and is again able to bear the blasts and buffetings of active existence. But let us proceed regularly, and detail the mode of *treatment* necessary through all the stages of the Fever above described: and much of this will be applicable in most forms of febrile disease, the duration of which, it should be borne in mind, cannot, be shortened; there is a certain course for it to run, and the main object of all remedial measures should therefore be, to assist, as much as possible, the constitutional powers of the patient in this effort to overcome the effects of the poison which has entered into the system. To this end, as soon as the premonitory symptoms are observed, an inquiry should be instituted into the various organs, whose unimpeded operations conduce to a healthful condition of existence; if there be any functional derangements, any deficiency, or otherwise, of secretions or excretions, they should at once be attended to, and the medicines necessary to produce an alteration in their character or quantity, at once administered; above all, let the patient have pure air, and plenty of it; let him have cleanliness and quiet; keep him, as much as be, from all disturbing influences; let him have plenty of simple diluent drinks; there is nothing better than cold Toast-and-Water, or Barley-Water, with, perhaps, a little Lemon-juice in it: if nourishment is required, it should be given very moderately, and consist chiefly of Milk and farinaceous diet; such fruits as Currants, Grapes, Oranges, and Strawberries, may be given if they do not create flatulency and diarrhœa; but nothing prepared from meat, nor of a stimulant nature, except in low Nervous Fevers, and the later stages of Typhus, and some others, in which there is danger of the patient sinking from exhaustion. When there is much heat and dryness of the skin, sponging, once or twice a day with cold water will be refreshing and beneficial, and this may be resorted to with advantage in nearly all cases of Fever. After the administration of a gentle aperient, combined with some mild mercurial, to operate upon the bowels and liver, the skin and kidneys should be acted on by diaphoretics, combined with diuretics, in some such form as this: Nitrate of Potash, 1 drachm; Tincture of Hyoscyamus, 2 drachms; Sweet Spirits of Nitre, 3 drachms; Liquor of Acetate of Ammonia, 1 ounce; Camphor Mixture, sufficient to make 8 ounces; take two table-spoonfuls three times a day. Seidlitz Powders are also good, especially if there is a tendency to constipation; if it is otherwise, Soda Powders may be given occasionally with 20 drops of Tincture of Ginger, in each, if there is flatulency. The hydropathic treatment has been resorted to with great success in the treatment of Simple Continued Fever, but it can scarcely be properly carried out except at the regular establishments. Such are the aids to nature which may be safely recommended in the early stages of nearly all Fevers; in the second or reactionary stage, however, of that which we have been describing, when complications begin to arise, it will be necessary to modify the treatment according to the circumstances of the case, although the same general principles must be kept in view throughout. Thus, if there is cough and difficulty of breathing, a blister on the chest may be desirable; if there is tenderness of the bowels on pressure, half a dozen leeches should be applied; if there is diarrhœa, it must be checked by the medicines named under that head; if constipation, Castor Oil, Rhubarb, or Senna should be administered, or aperient injections thrown up. Congestion or inflammation of the brain, or any other organ, may call for topical or general bleeding; it was at one time thought that no inflammatory fever could be reduced without this latter mode of depletion, and much mischief has resulted from the free use of the lancet, in this as in many other forms of active disease; yet there can be no question that where the febrile symptoms run high, and the patient is of a full habit and vigorous constitution, bleeding from the arm in this case is very serviceable. Cold applications to the head, if there appears danger of cerebral congestion; hot bran bags to the abdomen if the urine is scanty or altogether retained; sleepless nights, and convulsive starting and twitching may require opiates, but these should always be administered with caution, on account of the way in which they sometimes affect the brain.

Such is an outline of treatment of Fevers in general, and of the two first stages of common Fever in particular. When it assumes the typhoid character the treatment becomes more difficult; then, more than ever, it is necessary that the patient's body and mind should have perfect rest: no attempts should be made to shorten the duration of the disease, especially by lowering the system, as the time will surely come when all the physical energies will be required to recover the patient from the state of exhaustion to which he has been reduced.

We generally look for the typhoid symptons at about the end of the second week of the Fever, and as soon as they appear, we commence strengthening the system for the great trial it must sustain, by all the means in our power, having, however, a due regard to local congestions, and other complications, which may present themselves. If the brain is not too much affected, we at once resort to stimulants, such as Brandy or Port Wine, the latter mulled, with a grain or two of Quinine in each dose of half a wineglassful two or three times a day; if there is much cerebral excitement, we give Ammonia, the Carbonate, 5 grains, or Aromatic Spirit 10 drops, in one ounce of Decoction of Bark three times a day; also Beef Tea in small quantities frequently. It is the rule in most diseases to wait for a clean tongue, and moist skin, before we administer tonics and stimulants; but, in this, we should often lose our patients if we did so: very commonly we administer these even when we know Pneumonia or Bronchitis are present, overlooking the lesser for the greater danger; besides which, it is by no means clear that the stimulant method of treating Pneumonia is not the most successful, at all events we have found it so. Sulphate of Quinine, 1 grain, with 10 drops of dilute Sulphuric Acid, in 1 ounce of Infusion of Roses, is a good form of tonic; its acidity, too, renders it pleasant and refreshing to the fever-stricken. When the debility is extreme, Brandy and Port Wine, in equal proportions, ½ a wineglass together may be given; we have known a patient take as much as two bottles of the latter in a day. It is sometimes necessary to give nutrients and stimulants in very small quantities—the power of swallowing being nearly lost, a teaspoonful of Port Wine, thickened with Arrowroot, every quarter of an hour or ten minutes; or of Beef Tea, with a little Brandy in it; in this case, too, a Beef Tea clyster may be used with advantage. When, as is often the case, there is paralysis of the bladder, so that the urine does not pass off, a catheter must be used. It is necessary to pay particular attention to the back and other parts of a typhus patient, as troublesome bed-sores frequently occur; the use of the water-bed will generally prevent this, should it not, the remedies mentioned under the head of *Bed-sores* must be employed. As the typhoid symptoms disappear, and convalescence becomes fairly established, the greatest mischief is to be apprehended from an indulgence of that craving for solid food and stimulant drinks which is experienced by the patient; he longs for Chops and Steaks, Oysters, and Ale, he is sick of Arrowroot, and Beef Tea, and all kinds of "slops," and becomes quite angry that he cannot have some change of diet; he wants something solid to eat, now that he has an appetite for it; but a judicious nurse will deny him this gratification for a time; light puddings of Arrowroot, Ground Rice, Sago, Semolina, or Tapioca, may be first ventured on; and when the tongue is quite clean, and all febrile symptoms have disappeared, a beginning of meat diet may be made with a small slice of chicken, and if this agrees with the stomach, there may be a gradual advance to stronger meats, with wholesome white kinds of fish for an occasional variety. It is likely that tonics may be required for a considerable time after the patient is convalescent, and as soon as there is sufficient strength for the journey, it is desirable that he should have a change of air, especially if the same local influences are still in operation by which the disease was first induced. We should have mentioned above, that in cases of Fever of a low malignant kind, fresh Yeast, in teaspoon doses, given every three or four hours, has been found very beneficial, and that through the whole course of the disease, disinfectants, such as the Chloride of Lime or Zinc, should be freely used.

We have next to speak of the Periodic Fevers, divided into Intermittents and Remittents, the first, including the various forms of *Ague* (for particulars of which see that head); the second, differing therefrom in having but imperfect remissions of its symptoms, with no decided intervals of entire relief; this partakes somewhat of the character of both Continued and Intermittent Fever, and forms as it were a link between the two; it attacks both old and young, but has not quite the same characteristic in the former as in the latter; it will, therefore, be convenient to describe it under two heads, and, first as *Adult Remittent*, sometimes called *Gastric* or *Bilious*, or *Yellow Fever*, the latter being its most intense and dangerous form, in which it is seldom or ever seen in this country, full particulars of symptoms, treatment, &c., of this Fever in its several manifestations are given under the head *Bile;* we therefore pass on to consider *Infantile Remittent*, sometimes called *Infantile Hectic*, *Stomach*. or *Worm Fever:* this attacks children of all ages up to 10 or 12 years; it is characterized by fetid unhealthy motions, pain in the abdomen, variable appetite, a furred but moist tongue, a generally weak and irregular pulse, varying from 90 to 150, and upwards. There is generally head ache and drowsiness, indicating cerebral disturbance; the child sleeps much, but not soundly; it moans and talks incoherently, and starts at the slightest sound; there is generally flatulence, causing great distension of the abdomen; often cough with difficult respiration. There is usually, in this Fever, periodic paroxysms and remissions, sometimes daily, sometimes twice a-day, and occasionally three times, the one at night being the longest and most severe. The approaches of this disease are gradual, and for a time almost imperceptible; there is a loss of appetite, flesh, and spirits, which the mother does not at first notice, or if she does, attributes it to a disordered stomach; then the countenance becomes pale, and has a worn, anxious look, with, perhaps a hectic spot on either cheek, appearing and disappearing with the paroxysms of fever, which now begin to be distinctly marked, as do the symptoms above enumerated. The weak and listless child is not, perhaps, for a long time confined to its bed, but it lolls and lies about, and doses and wakes with a start, and moans and complains fretfully, picking its nose and fingers, and exhibiting other signs of debility and nervous irritations; there is no great thirst, the bowels are often obstinate, and the motions, when they do occur, are of an unhealthy character, slimy, and deficient of bile; the urine is thick, dark coloured, and scanty, and so the disease goes on until the patient sinks exhausted, or else the bad symptoms gradually abate, and a recovery takes place, brought about perhaps in a great measure by a judicious course of *treatment*, which will vary somewhat in accordance with the constitution of the child, and the exciting cause of the disease; if it can be traced to an excess of rich or unwholesome food, the proper course, if the child is sufficiently strong to bear it, is to administer first an emetic, and then an active purgative, including some preparation of Mercury; after this, effervescing draughts, rendered palatable by Syrup, which may be given two or three times a-day, and continued as long as the febrile symptoms do not abate, especially if there be nausea, amounting to a desire to vomit. If, as is sometimes the case, the Fever arises from obstinate constipation, the mercurial purgative should be repeated every day until the bowels are freely opened, and then for a time every other, or every third day. Sometimes the irritation is set up by teething, and then there is generally diarrhœa, which it is never well to stop too suddenly; when, however, this is found to be weakening the system too much, and keeping up the irritation, a common Chalk Mixture with about 5 grains of Aromatic Confection in each dose of about a tablespoonful, may be given. Should this not have the desired effect, and serious inflammation in the bowels ensue, Mercury and Opium in very small doses may be tried: of the grey Powder, 2 grains, or Calomel, ½ a grain, with 1-6th of a grain of Opium, administered every 4 hours, until the desired effect is produced, or 12 of the powders have been given; beyond this it is not safe to go, except it be under the direction of the medical man, whom the prudent mother will do well to consult as soon as the disease has shown itself; it will be better to trust to nature, aided by such remedial measures as common sense suggests, than to go beyond the remedies here prescribed. The fever will have its course, be the measures adopted what they may, and if the child has a good constitution he will most likely recover eventually, although he will be greatly weakened by the attack; the great principle of the treatment, in this as well as in all Fevers, is to watch the symptoms carefully, and guard against inflammation seizing upon any important organ; to keep the system in such a condition as to render it least liable to inflammatory action; to support the strength when needed, and to aid nature by all possible means in her efforts to restore the system of the patient to a healthy condition.

Hectic Fever, which belongs to the class of remittents, is characterised by slight shiverings succeeded by flushings, which are generally accompanied by that bright red spot on each cheek, which is so marked a symptom of the disease; profuse and exhausting perspirations follow the hot stages. There are usually two paroxysms in the 24 hours, one commencing about noon and lasting three or four hours, and the other coming on at 10 or 12 at night, and continuing until 2 or 3 o'clock in the morning. At first between the attacks there are complete remissions of the bad symptoms, the patient is tolerably cheerful, and takes his food with an appetite; but, gradually, the paroxysms become longer and more severe, the sweats more excessive, and complete prostration ensues; death being commonly hastened by the setting in of diarrhœa. Local irritation of some kind is always the *cause* of this disease; it may be of the lungs, as in consumption, in the latter stages of which the hectic flush is nearly always present; or it may be of the hip joint, or of some other part where there is extensive suppuration of the tissues, and formation of matter. The *treatment* here must depend very much upon the cause. (See *Abscess*, *Consumption*, *Hip-joint)*. For the colliquative sweats and diarrhœa, there should be an administration of *Astringents*. (which see) and *Diarrhœa*. It sometimes happens that there is no apparent disease to which the hectic symptoms can be attributed, it would therefore appear to be the result of debility; in this case the *treatment* should be much the same as that proper for an intermittent fever; tonics, with a light nourishing diet, chiefly Milk, easily digested vegetables, and farinaceous compounds.

We now come to *Eruptive Fevers*, which are characterised by the before-named general febrile symptoms, more or less severe, followed by an eruption sufficiently distinctive in each case to determine the name of the disease. As a rule these only occur once in the life of an individual: particulars of them will be found under the several heads of *Small-pox*, *Cow-pox*, *Chicken-pox*, *Measles*, *Scarlatina*, *Plague*, *Miliary Fever*, the latter of which may be regarded as rather symptomatic of some other complaint than as constituting a disease of itself. (For other forms of febrile disease, see the various heads already referred to).

Before quitting this subject, we would impress upon our readers the necessity there is of obtaining professional advice in all cases of Fever, whose forms are so various, complications so great, action frequently so rapid, and effects so fatal, that it is impossible for one, unpractised in the diagnosis of diseases, and unskilled in its treatment, to distinguish the several varieties, and determine on the proper treatment.

Fiber. The Latin name for the Beaver; an animal which supplies the substance called *Castor*, (which see).

Fibre. (Latin, *fibra*, a filament.) This may be either animal or woody, the latter constituting the fibrous structure of all vegetable substances; but it is with the former only that we have here to do; that is, the collection of filaments which compose the muscular fasciculi, &c., of the human body, and constitute what is called the Fibrous System; this is capable of division into membranes and organs, the former being, 1st, those which cover certain organs, and contribute to their texture, such as *Periosteum*, which covers bone; the *Perichondrium*, which covers cartilage; the *Dura Mater;* the *Tunica Albuginea*, and the proper membranes of the *Kidneys* and *Spleen*, &c., (all of which see). 2nd, the *Fibrous Capsules*, or cylindrical bags found around some of the osseous articulations, such as those of the *Humerus* and *Femur*, (which see). 3rd, the *Fibrous Sheaths*, which confine the tendons in their situations, especially in passing over the bones, where they are much inflected, as in the fingers and toes; some of these sheaths confine a number of tendons, as the wrist and instep, and some only one or two, as in the fingers. 4th, the *Aponeurosis*, a kind of fibrous canvas, sometimes forming coverings for different parts; at others, furnishing muscles with points of insertion.

The *Fibrous Organs* are, 1st, those found at the extremities, or in the centre of muscles; they are either simple, like a single extended thread, or compound, as in the *Femoris*, *Flexus*, *Rectus*, &c.; (all of which see). 2nd, the ligaments, which secure the articulated joints, around which they are placed; they are formed of regular fasciculi (little bundles), as those of the elbow, jaw, knee, &c., or of irregular fasiculi, as those of the rib, pelvis, &c.

Fibrin. A tough fibrous mass, which, together with albumen, forms the basis of muscle; it is identical in composition with albumen; but, when digested in the stomach, is better fitted for becoming incorporated with the bony tissues, and, therefore, contributes a larger amount of nutrition. In the muscular tissues of man, and other animals, Fibrin is present in a solid state; it is also present in the blood, in the shape of fine filaments, enclosing the red globules, and, together with them, forming what is called *Clot*, or *Crassamentum*, (which see), and *Blood*.

Fibro-cartilage. The substance which constitutes the base of the ear, determining the form of that part, and also which composes the rings of the *Trachea*, *Epiglottis*, &c., (which see), and *Ear*.

FIBULA. (Latin for a clasp.) A term applied to the lesser bone of the leg, and also to a curved needle used for sewing up wounds: the designation of the external popliteal or peroneal nerve, and the lymphatic arteries, &c., therewith connected, is *Fibular*.

FICUTIO, or FICUS. A fig-like tubercle about the anus, or pudenda. (See *Sycosis*.)

FIDGETS. A state of general restlessness, and desire for change of position; the term is probably a corruption of *fugitive*. See *Titubatio*.

FIFTH PAIR. A term applied to the trifacial nerves, which are the largest of the brain. See *Nerves*.

FIGS. (Latin, *Ficus*.) The fruit of the *Ficus Carica*, which comes to perfection chiefly in hot climates; the pulp is wholesome, and somewhat aperient, but the tough skin is indigestible, and should not be eaten by those whose organs of digestion are at all weak. Children who are subject to constipation, may take the pulp with advantage. Green figs, as we call those which grow in this country, are more laxative than the preserved ones from abroad, but they have a mawkish, and, to most persons, an unpleasant flavour. The finest foreign figs come from Smyrna, and other parts of Turkey; if good, they are large and plump, not shrivelled and leathery, as those in the shops too frequently are, being in this state very unwholesome. Figs are sometimes used externally, boiled in milk, or roasted; they are applied to boils and small abscesses, to promote suppuration; in this way they are particularly applicable to gum-boils. They are also an ingredient in the compound Decoction of Barley and Confection of Senna. In the following combination, they make a good demulcent gargle for inflammatory sore throat:—Mallow Roots, 1 ounce; or if these cannot be obtained, Linseed, 1 ounce; to 2 or 3 figs, split open; Water, 2 pints; boil to a pint, and strain.

FILAMENT. (Latin *filum* a thread). A small thread like structure, or *Fibre* (which see).

FILBERTS. The fruit of a variety of the *Corylus Avellana*. The term was originally applied to all nuts with very long husks; but of late the varieties have become so numerous, that this distinction has ceased to be regarded, and nut and filbert have become almost synonymous terms, except that the wild, uncultivated hazel nut, and those varieties which nearly approach it in form, are never called filberts, the eating of which, except as an occasional luxury, we would warn our readers against; like all nuts, they are very indigestible; perhaps now and then, with a glass of good port or sherry wine, and a little salt (*cum grano salis*), they may do no great harm, but it would be exercising a sound discretion not to eat them at all.

FILIFORM (Latin *filum*, and *forma* likeness). Thread-like; applied to the papillæ at the edges of the *Tongue* (which see).

FILM. A popular term for opacity of the cornea. See *Eye*, *Leucoma*.

Filtration. (Latin *filtrum*, a strainer). The straining of fluids through paper, linen, sand, &c., for the purpose of purification; the strainers are termed *filters*.

We extract from a very useful little work, entitled *The Practical Housewife*, the following clear and simple directions on this head:—

"The operations of straining and filtering are frequently required in domestic manipulations, and the apparatus employed usually consists of sieves, and a jelly-bag. As in many other instances, it will be found advantageous to import several contrivances from the laboratory to the kitchen. One of the most useful (because most simple) strainers consists of a square frame, formed of four pieces of wood nailed together at the corners, with a piece of calico, linen, or canvas, of suitable fineness, tacked to the four sides. This strainer is particularly useful in separating any solid substance—as the residue in making wines; or if grated potatoes are put on one made of coarse cloth, the starch can be readily washed through, leaving the useless portion on the strainer; the cloth should not be tacked very loosely, as it bags down when any substance is put on it, and the liquid runs away below from the centre. This strainer is a most useful one; it is readily made, of any degree of fineness, and of any size; and it also possesses the great advantage, that, if necessary, the tacks fastening the cloth can easily be withdrawn, when the substance remaining can be rolled up in the cloth, and tightly squeezed, to express the last portions of liquid, which are frequently the most valuable.

In cases, where a finer filtration is required than can be obtained by means of a cloth, as in cleaning turbid wine or spirit, the use of filtering paper is recommended. This paper is merely a stouter kind of blotting-paper, thick varieties of which answer very well for domestic purposes; it is most simply used by taking a square piece, folding it into half—by bringing the two opposite edges together—and then folding the oblong so obtained across its length. By this means, a small square is obtained, one quarter the original size, which may be opened into a hollow cup, having three thicknesses of paper on one side, and one on the other; this is to be placed, with the point downwards, in a funnel, and the liquid poured in; and as soon as the pores of the paper are expanded by the moisture, it will be found to flow through perfectly clear. Care must be taken, in making the filter not to finger it much where the two foldings cross each other, as a hole is readily made at that part, and the filter spoiled. The objection to this simple contrivance is, that from its flat sides applying themselves closely to those of the funnel, the flow of the liquid is impeded, and is therefore slow. This effect may be obviated by the use of the plaited filter, the construction of which we will endeavour to describe. A square piece of filtering or stout blotting-paper, is to be doubled, and the oblong so obtained is to be again folded in half, when, if the last fold is opened, it will have the appearance of fig. 1. From the corners, *b b*, folds are to be creased in the direction towards *a*, but not reaching it for half-an-inch; these are indicated by the dotted lines, which divide the double paper into four triangles, each of which is to be again folded into eights; and care must be taken that all the folds are made the same way, that is projecting to the same side of the paper. When complete, the doubled and creased paper will appear as fig 2. Now divide each eighth into half, by a fold in the *opposite* direction to those previously made, when it will be found that the whole will readily fold up like a paper fan. The projecting loose ends which are formed by the corners *b*, should be cut off, and the double sides separated for the first time by blowing them apart, when the whole may be readily opened out as in fig. 3.

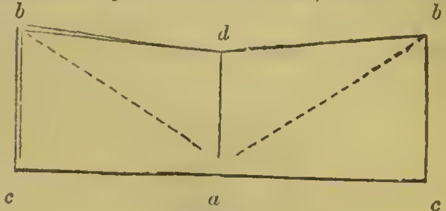


Fig. 1.

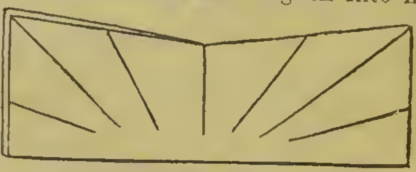


Fig. 2.

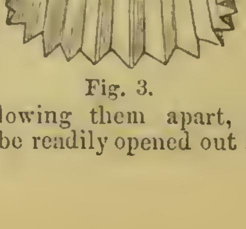
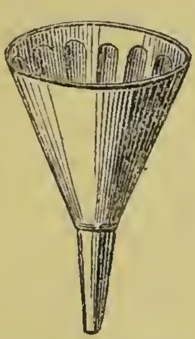


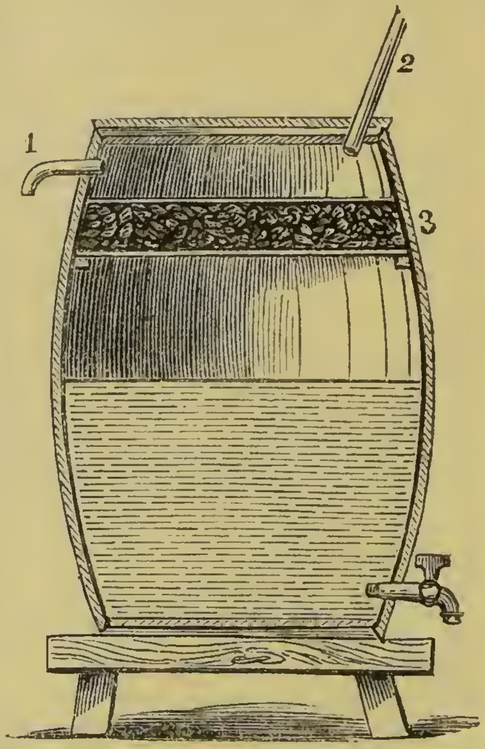
Fig. 3.

In making this filter, which takes a much less time than to follow the description, two precautions are requisite. The folds should be made at once with one firm pressure, and not with a series of rubbings; and all the creases should stop short of the middle, otherwise a hole will be made at that point long before the filter is completed. The advantages of this filter are, that it exposes a large surface for the liquid to pass through; and from its only being in contact with the funnel where the angles project, the current flows away readily."

We should add to this, that the funnel into which the paper is put, should be of glass or porcelain—the composition known as Wedgewood ware, is as good as any—and ribbed on the inside, as represented in the diagram. As a small amount of impurity generally passes through with the first two or three ounces of the fluid, it is best to let that quantity run through a second time.



As the purity of the water used for drinking purposes, is of great importance in a sanatory point of view, we would recommend in all cases, where that cannot be obtained fresh and clear, that some kind of filter should be used. Various contrivances for this purpose, are in vogue, the one represented below, is as simple and efficacious as any:—Get a barrel of any size required, an earthen one is best, insert near the top a short pipe with a downward curve (1) for the overflow of water; it must, of course, have a cover, and at the side of it, furthest from that of the barrel where this pipe is inserted, make a hole sufficiently large for the larger supply pipe (2), to go in; at about a quarter of the depth of the barrel there should be a ledge for the frame or false bottom of the filter to rest upon; this should be a stout plate of zinc pierced with small holes, and on it should be laid, first, two inches in depth of clean pebbles, on these two inches of well-washed sand, above this two inches of powdered charcoal, and then two inches of stones, sufficiently large to retain their position when the water flows in; these several layers must be renewed occasionally, as they will become filled with impurities which they retain; if the barrel stands on a block in some convenient place the water can be drawn out as it is required for use. Another and simpler plan is that recommended recently in an account of the *Proceedings of the British Association*—Take any common vessel, with a hole at the bottom, such as a flower-pot, fill the lower portion with coarse pebbles, over which place a layer of fine ones, on these a layer of clean coarse sand, and on that again a piece of burnt clay, perforated with small holes, and on this a stratum 3 or 4 inches thick of well-burnt powdered charcoal; hang it over, or let it rest on, some fitting receptacle, pour water in at the top, and it will percolate through the strata of the filter, and come out perfectly pure through the hole in the bottom. This will shew the principle on which Filters are constructed, and enable any ingenious person to make one according to his requirements. See *Charcoal*, *Water*.



We may add to these two other contrivances for water filtering, which appear to combine simplicity with utility. Fig. 1 is a square box of slate or other material, divided by a partition and horizontal layers of filtering material; the side is supposed to be taken away to show the interior. The water is poured into *b*, and passes through

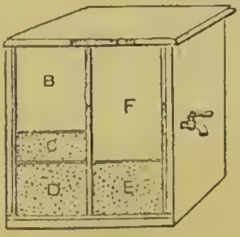


Fig. 1.

c, *d*, and *e*, and rises into *f*, from whence it is drawn bright and clear by the tap. It is the invention of Stirling, New Oxford Street, London. Fig. 2 is a filter of a different kind, or water-purifier, as it is called by the

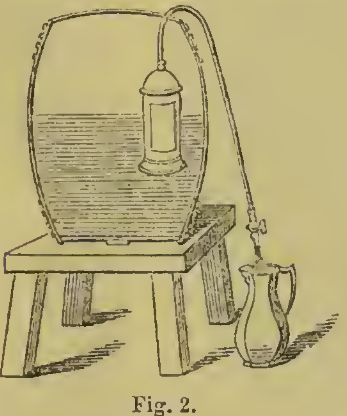


Fig. 2.

inventor, Bird, of Birmingham. The strainer is plunged into the water, and by means of a syphon-tube, with which it is connected, the water flows from the cask or vessel in which it is placed, quite fit for drinking. Both these filters were shown in the Great Exhibition.

Filtrum. The superficial gutter along the upper lip, from the partition of the nose to the top of the *Lip* (which see).

Fimbria (Latin for a fringe). The fringe-like extremity of the Fallopian Tube; (see *Uterus*).

Fingers. As the form and construction of these will be described fully when we come to treat of the *Hand*, we need not enter into the subject here, nor need we say much of the injuries to which the fingers are liable, as these are spoken of under the head of *Cuts*, *Dislocations*, *Fractures*, *Nails*, *Whitlows*, *&c*. The only directions which we shall now give are those for the removal of a ring which has become fixed on the finger from the swelling of the skin or joint; the first plan to be tried is to dip the finger in cold water, and rub it with soap, should the efforts to slip off the ring not be successful, try this plan—Take a piece of strong pack-thread, or fine twine, and beginning at the top, wind it gradually and evenly round the finger until the ring is reached, under which the end should be slipped, then taking a firm hold of the end, begin to unwind the packthread, and the ring will generally come off with it. Should this be unsuccessful, the ring must be cut through by a fine file, or a pair of cutting pliers, a piece of thin metal being first inserted to prevent injury to the skin. If the ring is allowed to remain on, it is very likely to cause inflammation, and perhaps the loss of the finger.

Fire. As the *Family Doctor* must be, to a certain extent, a domestic economist, we do not think it out of our sphere to give a little plain advice about fires and fire-places, and first let us say that, for health as well as comfort, there is nothing like an English coal fire, in an open stove. As for those close contrivances in which we see nothing but a sort of magnified pepper, or salt-box, painted black, we cannot hold with them, they are not healthy, and they are not comfortable; but, on this head, we shall have more to say when we come to speak of stoves, at present our attention must be confined to fires and fire-places: by all means we say, then, let it be a coal fire, kept brightly burning, by adding a few coals at the time, and frequently, and not placed too high from the floor, as if it is, a great part of the heat goes up the chimney, instead of being diffused through the room; the bottom bar should not be more than five or six inches from the hearth. See *Grate*, *Stove*.

We extract from one of Messrs. Ward and Lock's "Handy Books," entitled *How to Furnish a House, and make it a Home*, the following practical suggestions on the subject before us:—

"Although a large open fire-place helps in keeping a room ventilated, it is objectionable because of the draughts which it creates. In old-fashioned houses, people are obliged to use screens, and many other contrivances, to shelter themselves from the currents of air which come from all quarters, to give stiff-necks, ear-aches, and other unwelcome twinges to those who sit near the great cavern called a fire-place, where they are scorched on one side and frozen on the other. With such arrangements, a room never can be warm, because the air rushes away so fast that the walls have never time to get heated, and at a distance from the fire are as cold as out of doors.

"A good deal of the inconvenience of smoke might be avoided by the proper management of a fire. Count Rumford observes—'Nothing can be more perfectly void of common-sense, and wasteful and slovenly at the same time, than the manner in which chimney fires, and particularly where coals are burned, are commonly managed by servants. They throw on a load of coals at once, through which the flame is hours making its way; and frequently it is not without much trouble that the fire is prevented from going quite out. During this time no heat is communicated to the room, and what is still worse, the throat of the chimney is occupied merely by a heavy dense vapour, not possessed of any considerable degree of heat, and consequently not having much elasticity. The current of warm air from the room which presses into the chimney, crosses upon the current of heavy smoke which rises slowly from the fire, obstructs it in its ascent, and beats it back into the room; hence it is that chimneys so often smoke when too large a quantity of fresh coals is put upon the fire. So many coals should never be put upon the fire at once as to prevent the free passage of the flame between them. In short, a fire should never be smothered; and when proper attention is paid to the quantity of coals put on, there will be very little use for the poker; and this fact will contribute very much to cleanliness, and to the preservation of furniture.

'Those who have feeling enough to be made miserable by anything careless, slovenly, and wasteful, which happens under their eyes,—who know what comfort is, and consequently are worthy of the enjoyments of a *clean hearth'* and a *cheerful fire*, should really either take the trouble themselves to manage their fires, (which, indeed, would rather be an amusement to them than a trouble), or they should instruct their servants to manage them better.'

"These sensible observations were written nearly sixty years ago, but they are just as valuable now as they were then. The Count devoted much attention to household economy generally, and as we know of no better plans for curing or preventing a smoky chimney, and saving fuel than his, we shall endeavour to give such a simple account of them as will enable any working bricklayer or mason either to build a new chimney properly, or to alter an old one on correct principles.

"Generally speaking, it will be necessary to diminish the opening of the fire-place—that is, to make it smaller; and to fix the grate more forward and less high than has been the practice. Sometimes a straight stone slab placed all across under the mantel, or a row of bricks supported by a flat iron bar, will be sufficient to effect a cure; for this lowers the breast of the chimney, and diminishes the size of the opening of the fire-place. The breast of a chimney is that part against which the mantel is built, and a good deal depends on the way on which this is finished on the inside.

"Then, if we wish smoke to ascend easily, we must place the throat, or lower part of the chimney, immediately over the fire; the back of the fire-place also should be built perpendicular. There is no more reason why smoke should refuse to ascend a properly-constructed chimney, than that water should refuse to descend through a pipe.

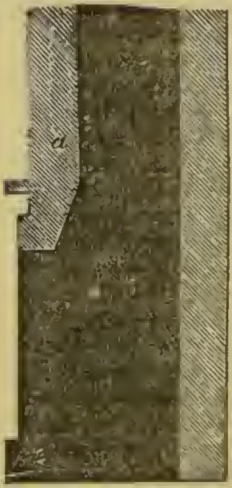


Fig. 1.

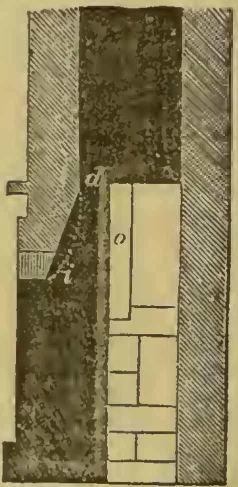


Fig. 2.

And it will be seen from the diagrams that these improvements can be made with but a small amount of trouble.

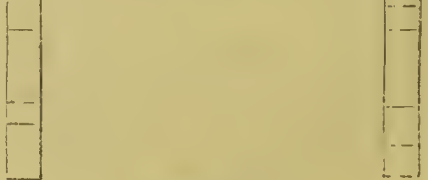


Fig. 3.

"Figure 1 shows a fire-place and part of the chimney, as usually built; an opening with square sides, in which the grate is fixed so far back that most of the heat is lost. The depth, however, from back to front should not be more than from 9 to 13 inches; the back is, therefore, to be built up, as shown at figure 2, and in the ground plan, figure 4. It will be seen that the chimney breast has a small piece added to lower it.

"Figure 4 represents the ground plan of the fire-place in figure 1; but instead of square, it is to have sloping sides, and is to be filled up as in figure 4. To do this according to rule, a line A, B, is to be drawn straight from one jamb to the other; and from the centre of this, a cross line *e* is to be drawn from front to back. The mason is then to hold a plumb-line against the inside of the chimney breast, where it begins to run straight upwards, as, for example, at *a*, figure 1, and the spot where the plumb-line rests on the cross line *e* is to be carefully marked. Four inches behind this mark is the position for the back of the fire-place, as shown by the brickwork in figure 2, which, by being so placed, gives four inches as the dimensions from back to front of the throat of the chimney seen at *d*.

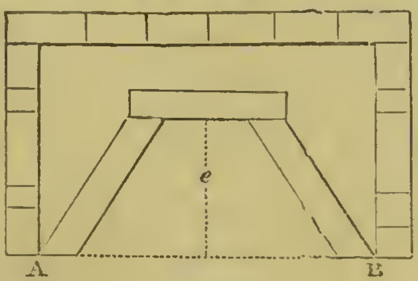


Fig. 4.

"This brickwork, and the sides, are to be carried up from six to nine inches above the lowest part of the chimney breast, so as to give a sufficient length and form to the throat *d*; and instead of being finished irregularly, or with a slope at the top, it must be perfectly flat and level; because when the wind sets down the chimney, if it strikes against a slope it drives the smoke into the room, but not if it strikes upon a flat Too much pains cannot be taken to make a good finish of the inside of the breast; it should be quite smooth and perpendicular, so as to offer no impediment to the ascent of the smoke. The lower part is to be carefully rounded off with plaster, as at *i*, figure 2, instead of being left square or rough and badly finished, as it nearly always is.

"The way to fix the sides or coverings of the fire-place is at a slope or angle, as shown at figure 4. It has been found that an angle of 45 degrees is that which throws the most heat into the room. These angles and the back should be made of fire-brick, and if each of one piece the better, as it will then be easy to place them in the position represented in the diagram. The hollow spaces behind may be filled up with regular layers of brickwork, all brought to the same flat level at the top. It is a mistake to suppose that iron is the best material for the back and sides of a grate; fire-brick is much better. Iron absorbs the heat—fire-brick throws it out, and besides it can be white-washed which is a great economy, for white throws out both light and heat, which black does not. All parts of a fire-place not liable to be blackened by smoke, should be kept white, it is a common practice to do so in the United States.

"Any workman may get the angle of the sides by an easy way, shown at figure 5. On a board, bench, or table, or on the floor, draw three equal squares, from twelve to fifteen inches each way, as A, B, C; and from the back corner *e* of the central square B, draw a diagonal line across the square A, to the outer corner *f*. This gives the angle at which the sides are to be fixed; and if a wooden bevel or mould-board be made exactly to this plan, a bricklayer will always be able to use it in setting out his work, and with something like certainty that he is doing right. If the chimney should be an uncommonly smoky one, or if the grate should not be exactly of the required width, either of the other two angles shown by the dotted lines may be chosen. To leave room for sweeping the chimney, the upper part of the back is to be a single slab, as at *o*, figure 2, which is to be fitted so as to shift in or out. This can easily be done by standing the slab in its place, and finishing the other work up to it, being careful to leave all level at the top. By taking out this slab when the chimney requires sweeping, room is left for the passage of the brush, and when it is replaced it leaves the chimney throat as perfect as before.

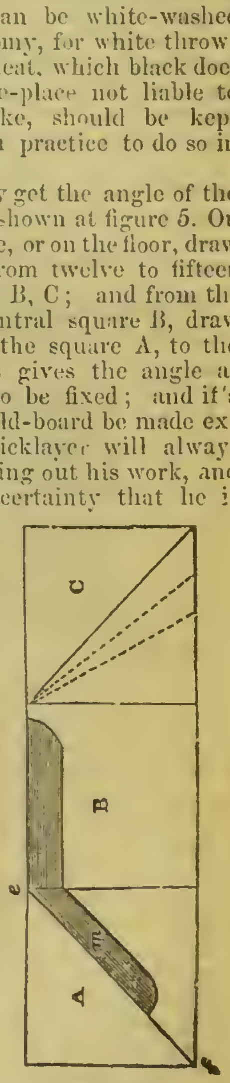


Fig. 5.

"The true proportions of a grate are, to have the width of the front three times the width of the back. Nine inches should be the width of the back, and the depth of the grate from back to front the same, which multiplied by three, gives twenty-seven inches as the width of the front. These dimensions are not to be departed from, unless under strong necessity; by keeping to them, the sides or copings of the fire-place will always be at an angle of 45 degrees, as above-mentioned. As a rule, the height of the fire-place should be the same as the width.

"If these directions are carefully followed, it will be found that the fire-place will be complete all but the bars, a matter worth consideration, because the less iron there is about a grate the better. The bars and bottom may be made of iron all in one, and the bottom is not to be more than five inches from the hearth; for a grate when fixed low sends more heat into the room than when fixed high. Figure 6 represents a fire-place complete. It does not look so elegant or showy as those which modern taste has produced, but it will be found far more serviceable and economical.

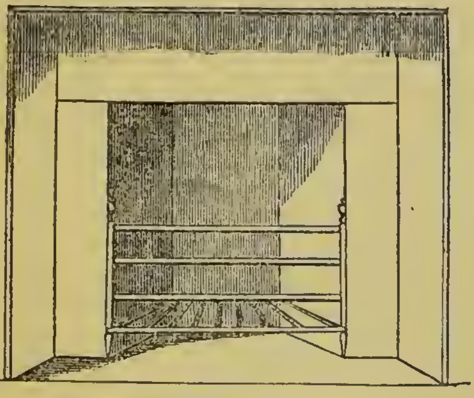


Fig. 6.

"In cases where the breast of the chimney is nine inches thick, the four inches which have to be allowed for the throat behind this, will make the fire-place thirteen inches deep. The back must then be thirteen inches wide, and the front three times thirteen, or thirty-nine inches, and the angles will be in their true position. A fire-place of this size will warm a large room, while a grate nine inches deep will serve for all ordinary sitting-rooms.

"A cheerful and steady fire is so great a comfort as to make it worth while to take a little pains to insure it. The plan here described, if properly carried out, cannot fail of success, and will leave little need for chimney-pots or cowls." See also *Heat.*

Fire Damp, (sometimes called *Choke Damp*). An inflammable gas, evolved in coal mines), it consists almost entirely of light carburetted *Hydrogen.*

Fish.—As an article of diet this properly claims attention here; it is generally wholesome, and being easier of digestion than most kinds of flesh, may often be taken by convalescents and sickly persons, when stronger food could not be permitted. Of the different kinds of fish, which we commonly classify as Fresh Water, Salt Water, and Shell Fish, Dr. Paris observes that—"Turbot, Cod, Whiting, Haddock, Flounder and Sole, are the least heating of these nutritive species; and the flakiness of the fish, and its opaque appearance after being cooked, may be considered as true indicators of its goodness, for when the muscles remain semi-transparent and bluish after sufficient boiling, we may reject it as inferior in value, and not in season. When fish is in high perfection, there is also a layer of white curdy matter resembling coagulated albumen, interposed between the flakes. The Whiting—'the chicken of the sea,'—is well adapted for weak stomachs, on account of the little viscidity which it possesses; it is at the same time tender, white, and delicate, and conveys sufficient nutriment, with but little stimulus to the system. The Haddock is firmer in texture. Cod is not quite so digestible as the two former, but it is nutritious. Turbot is wholesome, *without lobster sauce.* Sole is tender, and yet sufficiently firm; it is, therefore, easy of digestion, and affords proper nutriment to delicate stomachs. Salmon is very nutritious, but being one of the oily fishes, is less digestible than many others—vinegar in some degree corrects the fault. Eels are always indigestible; so, we may add, are all kinds of shell-fish except Oysters, which may in general safely be given to invalids. Of the fresh water fish, the Trout and the Tench are perhaps the only ones which will suit weak stomachs; few of this class are palatable without rich wines and sauces, and therefore should be avoided by such." By Dr. Paris's observations, above quoted, it will be seen that the kinds which the physician can recommend are of firm texture, white and opaque when boiled, without oiliness and viscidity: neither Mackerel, Herrings, nor Sprats, all fish much used as articles of diet, are enumerated above; the two last are decidedly unsuitable for any but strong stomachs; the first, if quite fresh—that is, within about 12 hours of being caught,—are not unwholesome; if the weather be cool, the time may be extended to 24 hours, but after that they get soft and flabby, and become red round the eyes, sure signs that they are unfit for food. Some kinds of shell fish are, as it is well known, poisonous at all times; others are occasionally so, under peculiar circumstances which do not appear to be clearly understood; such are the Cockle and the Muscle. Those who feed much upon fish appear to be especially liable to chronic cutaneous diseases. It should be mentioned that the Salmon, Herring, and other oily fishes have, when kept too long, acted as irritant poisons. Boiling is the most wholesome way of cooking Fish.

FISH GLUE or Ichthyocalla, see *Isinglass.*

FISH SKIN DISEASE, see *Ichthyosis.*

FISSURE. (Latin *fissure*, from *findo* to cleave). Sometimes applied to a very fine crack in a bone; but more usually to a more marked division, such as *F. silvii*, the fissure which separates the anterior and posterior lobes of the cerebrum; *F. umbilicalis*, the groove of the umbilical vein, situated between the large and small lobes at the under and fore part of the liver, which, in the fœtus, contains the umbilical vein; and the *Fissure of the Spleen*, the groove which divides the inner surface of the Spleen; (see *Brain*, *Liver*, *Spleen*).

FISTULA (Latin for a pipe or reed). A long, sinuous, pipe-like ulcer, callous within, often communicating with a larger cavity. The chief kinds are—*Fistula in Ano*, penetrating into the cellular substance about the anus, or into the rectum itself: those in which the matter has made its escape by one or more openings through the skin only are called Blind External Fistulæ; those in which the discharge has been made into the cavity of the intestine, without any orifice in the skin, are termed Blind Internal Fistulæ; and those which have an opening both through the skin and into the gut, are called Complete Fistulæ.

F. in Perinæo is Fistula in the course of tho Perinæum, sometimes extending to the urethra, bladder, vagina. or rectum.

F. in Lachrymalis is Fistula penetrating into the lachrymal sac; and *F. Salivary* is Fistula penetrating into the salivary duct from a wound or ulcer. In Sharp's Surgery this last is described as "a disorder of the canals leading from the eye to the nose, which obstructs the natural progress of the tears, and makes them trickle down the cheek; but this is only the first and mildest stage of the disease: in the next there is matter discharged with the tears from the *puncta lachrymalis*, and sometimes from an orifice broke through the skin between the nose and angle of the eye. The worst and last degree of it is when the matter of the eye, by its long continuance, has not only corroded the neighbouring soft parts, but also affected the subjacent bone."

In surgery, the term Fistula is sometimes used synonymously with *Sinus* (which see). In this case, it signifies an opening or passage left by an abscess, perhaps in consequence of improper treatment, but more likely because the constitutional powers are too low to admit of adhesive inflammation, and the formation of healthy granulations; or it may be owing to the existence of a ligature, or the presence of a piece of dead bone, which sources of irritation must be got rid of before a cure can be effected; this, therefore, would be the object attempted at the outset of the *treatment;* which may be thus divided:—1st, to remove the cause; 2nd, to arrange that the matter secreted in the passage shall not be suffered to remain, and to effect this object a fresh opening sometimes has to be made; 3rd, to promote adhesion of the walls of the passage by the introduction of "a tent" of lint, and stimulating injections of Sulphate or Chloride of Zinc; sometimes also pressure is found serviceable for the attainment of this end.

Fistula in Ano is the most common form of the disease, and that which is generally understood by the term Fistula used by itself. In this, as before stated, the sinus is situated close by the anus, some inches above which the orifice, or tube, leading from the inside of the bowel often opens, although sometimes it runs up close to the interior, but does not open into it. There is commonly intense pain with this kind of Fistula, and an inability to move about. Domestic treatment will do little for it. If there is an external orifice, it can be kept open by means of twisted lint passed deeply in; but most commonly an operation is required which, although sharp, is short in its continuance: it consists in making a complete division with the knife, of the whole of the parts between the fistula and the bowel. After this the cure is generally effected without much difficulty; the spasmodic pains, nearly always felt, are at once relieved, and the constitutional derangement gradually passes away.

Fistula in Perinæo can only be treated by a competent surgeon: it is nearly always accompanied by a stricture of the urinary passage; so that the fluid passes out of the external orifice of the sinus, and nothing but an operation can be of much service. A *Lachrymal Fistula* is commonly treated by passing a silver instrument, called a style, down into the nasal duct, and keeping it there until the inflammation which produced or accompanied the abscess is subdued: this, too, must be a case for a surgeon: as must also a *Salivary Fistula*, which occurs in the cheek, and is caused by an abscess formed in or near the duct of the parotid gland, where the saliva passes from it to the mouth.

Fistula cases are nearly always difficult of treatment, and, although not in themselves dangerous, they are not unfrequently attended by fatal results, arising out of the constitutional depression which they occasion by the long-continued wearing pains, and drain upon the system of the protracted discharge. See *Ulcers*.

FITS. According to the popular application of this term, it may mean an attack of *Apoplexy*, *Epilepsy*, *Hysteria*, or any *Convulsive* or *Spasmodic affection* whatever, and, therefore, we must refer our readers to those several heads for *symptoms*, *treatment*, &c. As, however, there are certain general rules and directions which will apply to nearly all, we would call their attention to the following observations:—First, as to premonitory *symptoms;* these are, anxiety of mind, and dejection of spirits; nausea, and a feeling of faintness; yawning and stretching; swimming in the head, and palpitation of the heart. Second, as to *treatment*—loosen any part of the dress which may appear tight, especially about the neck and chest; if a female, cut the stay-lace, as tight lacing often causes Fits; sprinkle cold water on the face, and apply volatile stimulants to the nostrils; rub the temples with Eau-de-Cologne, Æther, or strong spirit of some kind, and blow upon them; sprinkle cold water in the face, and as soon as the patient can swallow, give 30 drops of Sal Volatile in Water, or the same of Æther, or if neither are at hand, a little cold Brandy and Water.

When the Fit is over, a gentle aperient should be taken, to be followed by cold bathing, exercise, and, if possible, change of air.

FIXED AIR. A name formerly applied by chemists to the gas which was extricated from lime, magnesia, and alkalies: we now call it *Carbonic Acid Gas* (which see.)

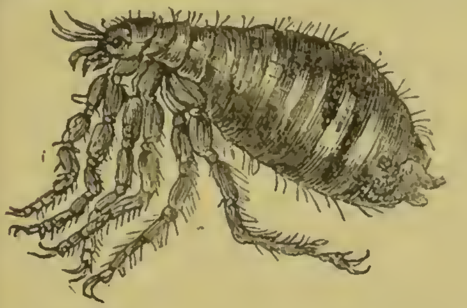
FIXED BODIES. Are those substances which do not evaporate by heat; so all oils which are not *volatile* are *fixed*, as are non-metallic elements which can neither be fused nor volatilized, as *carbon*, *silicon*, and *boron;* their steadfast property being called *fixity*.

FLANNEL. Under this head we include woollen clothing in general, which being a bad conductor of heat is best fitted to protect the body against the vicissitudes of temperature, which occur especially in this climate; but the generally understood meaning of the term is restricted to the blanket, and the finer kinds of spun wool which is used for under-garments. With our great liability to pulmonary complaints, there should not be a man, woman, or child in this country who does not wear flannel next the skin; over the chest certainly, and down the course of the spine, if not elsewhere; and it should be worn, too, in summer as well as winter, although it may be thinner in the latter season, as it absorbs the perspiration, and prevents the chills, which a wet linen or cotton garment is sure to cause. These chills are fruitful causes of the dysenteric and febrile affections of hot seasons and climates, against which, as all experience goes to prove, there is no such protection as Flannel. Why, then, is it not more generally worn? Mothers and nurses should co-operate with the medical man to obtain a universal recognition of its utility. See *Clothing*.

FLATULENCE (Latin *flatus* a blast). Wind in the intestines; this is very commonly the result of indigestion, owing to the liberation of gas from partially digested food in a state of fermentation. Sometimes, however, an impaired state of the nerves, gives rise to distension of the bowels by wind, an immense quantity of which is often discharged by the mouth or anus. Flatulence should be always considered as a symptom, and treated accordingly; it occurs in the various forms of Dyspepsia, or Diarrhœa, and Dysentery, in Hysteria, in Colic, Remittent Fever in adults, and Infantile Remittents, (all of which see). Where it prevails, there is generally an excess of acid in the stomach, so that in the remedies prescribed, alkalies and other anti-acids, often form the bases; they are usually combined with warm spices, and other aromatics, forming what are termed *Carminatives*, (which see). With nervous persons, however, this is not so generally the case, and tonics will be of more service for such. This is a good form of preparation:—Aromatic Sulphuric Acid, 10 drops in a wineglassful of water, when required; or 20 drops of dilute Nitric Acid, in a wineglassful of Infusion of Orange-peel, Gentian, Camomiles, or Columba. For Flatulence in Infants, there is nothing better than Dalby's Carminative, prepared as directed at page 80. For general Flatulency where there is much difficulty of expulsion, clysters of Assafœtida or Rue, will be of service, as well as this mixture:—Take of Sulphuric Ether, and Tincture of

Assafœtida of each 2 drachms, Peppermint-water, 6 ounces, take a table-spoonful occasionally. Hot applications to the stomach, and friction, will frequently afford considerable relief. Flatulent persons, should avoid most vegetables and fruits, and take only such food as is light and easy of digestion. Towards the termination of fevers, the stomach is often much distended with wind ; this is looked upon as a bad sign ; it is called *Tympanitis*, (which see) and *Wind.*

FLEA. We give a cut of this troublesome parasitic insect, although probably, most of our readers are but too well aware of its form ; for it is one of our commonest household nuisances ; we have it here, however, in its magnified proportions, and a horrid monster it looks, with long muscular, spiny legs, well adapted for leaping, and scaly body, neck, and head, beset with hairs, and armed with two lancets within a sheath, for piercing the skin of its victim, and a proboscis for sucking up its blood. Into the natural history of the creature, it suits not with our present purpose to enter at any length ; we may just say that its scientific name is *Pulex irritans*, and that the female, of which the above is a representation—the male being somewhat smaller, and different in shape, as shown in next column—deposits her eggs, some twenty or thirty in number, in the crevices of boards, or amid collections of dirt, or rubbish of any kind, from whence in six or eight days emerge the whitish, greasy-looking maggots; these, when a fortnight old, envelope themselves in small cocoons, and after remaining in this state about ten days, come out as perfect Fleas, ready to make war upon men, women, and children, but especially affecting those who have the most tender skins. How to get rid of them ? is the anxious question with all careful mothers and tidy housewives. Cleanliness and indefatigable hunting, we reply ; there is nothing to be done without trouble, and catching this nimble skipper, requires both quickness and patience in no ordinary degree. When there are Fleas in a bed-room, let the carpets be taken up, and the floors frequently washed, and then sprinkled with a strong decoction of Wormwood; among the bed clothes, put a bag filled with Dry Moss, the odour of which is said to be very offensive to them, as is also that of fresh-gathered Pennyroyal leaves. As a trap for them, some use Alder leaves, gathered while the dew is on them, to this the Fleas adhere, and may then be easily taken. Mercurial Ointment rubbed in the joints of the bedstead, and Sulphur fumigations, are also said to be efficacious in killing or expelling them ; Sweet or Train-oil they cannot abide, and to drive them from their last stronghold, the coat of the cat or dog, it is but necessary to pour some along the back, and then rub it in with the hand, until it is well incorporated with the hairs. Here is a choice of remedies ; but all will be of little avail without cleanliness — personal and otherwise. Only dirty, negligent people, are much troubled with Fleas. unless they are necessitated to live in old houses, of which they have long had possession, or in localities extremely favourable to their propagation ; the efforts of such should be constantly directed to keeping them under, and the above information may probably assist them. They are often extremely annoying to sick persons, and irritable children, depriving them of rest, and thus retarding restoration to health ; for this reason, the *Family Doctor* is bound to wage war against them ; besides, they inflict severe bites, and make ugly marks on the skin ; now, although *Flea Bites* are proverbially small matters, yet, they sometimes cause serious inflammation, not to speak of the disfigurement ; they should be rubbed over with a little Cold Cream, and if much inflamed, kept wet with a lotion of Elder Flowers with a few grains of Sugar of Lead dissolved in it.



FLEA BANE. This is the *Erigeron Ca-*

nadensis of botanists, belonging to the natural order *Compositæ;* it is found plentifully in the southern counties of England, and has diuretic, tonic, and astringent properties, which render it useful in dropsical complaints, and diarrhœa. Dose, of the flowering tops, in Powder, from 30 to 40 grains; of the Infusion, from 2 to 4 ounces; of the Extract, from 5 to 10 grains.

Flesh. It is not generally understood that all flesh is muscle, and employed as such in the movements of the living body; it consists chiefly of *Fibrine* (which see); also *Muscle.* Under the several heads of *Food*, *Beef*, *Mutton*, *Pork*, *Veal*, &c., we shall speak of the different kinds of flesh employed for nutrient purposes, and endeavour to show their respective powers and properties, and so inform our readers on those important questions—"What to eat?" and "What to avoid?" whether in health or sickness.

Flesh Brush. A smooth, hard brush, intended to act as a counter-irritant, or to stimulate the surface of the *Skin* (which see) and prevent the pores becoming clogged, in which state they are unfit for the performance of their excretory office. Persons whose circulation is languid, and system generally weak, do well to use the flesh brush frequently, especially on coming out of the bath, when it is desirable that a healthy glow should be felt through the frame; the friction, however, has been found too powerful for delicate skins, and it has later given place to a more convenient and altogether better contrivance. See *Hair-glove.*

Flexor (Latin *flecto*, to bend). A muscle which answers the purpose of bending the part into which it is inserted; its opposite is termed *Extensor* (which see).

Flint (Latin *silex*). A mineral; hence the Liquor of Flints (*Liquor Silicum*), a name formerly given to the Solution of Silicated Alkali.

Flocci Volitantes (Latin for flying specks). A symptom of eye-disease, consisting of the appearance of small moving objects such as locks of wool, or insects, before the sight. See *Eye*, *Muscæ Volitantes.*

Floccitatio (*floccus*, a lock of wool). Picking the bed-clothes; a symptom sometimes observed in fever and other patients. See *Fever.*

Flooding. Uterine hæmorrhage, or, to speak more plainly, bleeding from the womb. This commonly occurs after *Abortion* (which see); in the puerperal stage of *Labour* (which also see); or it may be occasioned by disease of the womb. Immoderate flow of the menses is also called flooding, and to this some women are very subject; it is extremely weakening to the system, and should be checked as soon as possible. The best treatment is perfect quiet, and astringent and tonic medicines, such as this: Tincture of the Sesquichloride of Iron, 2 drachms; Infusion of Quassia, 6 drachms: take a tablespoonful every four hours. If there is much pain and irritation, add Tincture of Conium, or Hyoscyamus, 2 drachms; should this not have the desired effect, consult a medical man, as there may be disease of the womb. See *Menstruration.*

Flour. The edible part of grain reduced to powder, and deprived of the husks by sifting. See *Farina.*

Flowers (Latin *floris*). A term formerly applied to bodies which assume the form of powder by sublimation, or crystallization; such as the Flowers of Benjamin (*F. Benzoes*), now called Benzoic Acid; Flowers of Sal Ammoniac (*F. Salis Ammoniaci*), Subcarbonate of Ammonia; Flowers of Sulphur (*F. Sulphuris*), Common Sublimed Sulphur; Flowers of Zinc and of Bismuth (*F. Zinci*, *F. Bismuthi*), Oxides of those metals, &c.

Fluctuation (Latin *fluctuo*, to flow, or rise and fall, like the waves). The perceptible motion communicated to pus, or other fluids by pressure, or *Percussion* (which see).

FLUID OF COTUNNIUS. A thin gelatinous fluid, found in the bony cavities of the labyrinth, so called from the name of the anatomist who first described it: *Aqua Labyrinthi* and *Perilymph* are names by which also it has been known.

FLUIDS. Are substances which have no fixed shape nor coherence of particles; they are divided into *Gases* and *Liquids* (which see).

FLUIDS OF THE BODY. A term sometimes applied to the blood, and other humours of the animal economy. Speaking of those of the human body, we say, 1. That they are *Crude;* that is, not having quite put on the animal nature; as the *Chyme* and *Chyle;* 2. They are *Sanguineous*, as the *Blood;* 3. *Lymphatic*, that is, found in the lymphatic vessels; 4. *Secretory*, those which are separated from the blood and called *Secretions;* 5. *Excrementitious*, those which are eliminated, or cast out from the body as the *Fæces*, *Perspiration*, *Urine*, &c. Then again, the secreted fluids may be *Lacteal*, or milky, as the milk, juice of the prostrate gland, &c.; *Aqueous*, or watery, as the aqueous humour of the eye; *Mucous*, as the mucus of the nostril, &c.; *Albuminous*, as the serum of the blood; *Oleine*, as the oil of the adipose membrane; *Bilious*, as the bile and wax of the ears.

The Fluids of the Body are also divided according to their motions; thus they are *Circulating*, that is, continually passing hrough the vessels; *Commorant*, circulating with a very slow motion, as the oil of he adipose membrane and the semen; *Stagnant*, remaining for a certain time in ome receptacle, as *Cystic Bile*, *Urine*, and he *Fæces* above named. (See their several heads).

FLUIDITY (Latin *fluo*, to flow). The tate of bodies when their parts are readily moveable in all directions and separable rom each other; bodies of which the parts are condensed, or thickened into a coherent, hough tremulous mass, have a partial luidity, and hold a middle place between iquids and solids; such are *Jellies* (which ee).

FLUKE. The *Fascicola Hepatica*, an inestinal worm. See *Worms*.

FLUO-BORIC ACID. A gas produced by he decomposition of Fluor spar, by vitrified Boracic Acid. Its salts are called Fluoborates.

FLUOR ALBUS. A white discharge from he uterus. See *Leucorrhœa*, *Menstruration.*

FLUOR SPAR. Derbyshire Spar; properly Fluoride of Calcium, a mineral well known in many districts, being much used in metallurgic operations; acted on by Sulphuric Acid, it produces *Hydrofluoric Acid;* and this acid, which is a colourless gas, acting upon glass, produces *Fluo-silicic Acid;* and this again, combined with water, makes what is termed *Silico-hydrofluoric Acid.* We might proceed to speak of *Fluosilicates*, double Salts, consisting of two parts of *Hydrofluate of Silica*, and one Hydrofluate of some other base; and of *Fluorine*, a substance occurring chiefly in Fluor Spar in a state of combination with Lime; the base, as some chemists suppose, of Fluoric Acid: we might describe the uses and particular properties of all these combinations, but this would be entering further than is at all necessary into the mysteries of chemistry.

FLUX (Latin *fluo*, to flow). A name sometimes given to *Diarrhœa*, as Bloody Flux is to *Dysentery*. (See both those heads.)

FLUXUS CAPILLORUM. A term applied by Celsus to the falling off of the hair. (See *Alopecia* or *Alopina*). Parts entirely bald were called by him *Areæ;* this affection was termed by Sauvages *Alopecia areata*, and by Willau *Porrigo decalvans.* When the whole head is affected it is termed by the French *la Pelade.*

FŒTUS. The infant in the womb, from the fifth month to the period of birth, is so called; previous to that time, it is commonly called the Embryo; but these terms are entirely arbitrary, and we frequently use one for the other; (see *Conception*, *Gestation*, *Pregnancy.*) The destruction of the *Fœtus in utero* is now termed Criminal Abortion, and is sometimes spoken of as *Fœticide.*

FOLIATA TERRA, (Latin *folium*, a leaf, and *terra* the earth). A term applied to Flower of Sulphur, Acetate of Potash, on account of a supposed resemblance to a leaf in the flakes in which they are precipitated.

FOLLICLE (Latin *follis*, a bag). A very minute secreting cavity: thus the *Sebaceous Follicles* are small cavities situated in the skin, which supply the cuticle with an oily or sebaceous fluid, by minute ducts opening upon the surface (see *Skin*); and the *Mucous Follicles* are those situated in the mucous membrane, chiefly that of the *Intestines* (which see) and *Gland.*

FOMENTATION (Latin *foveo*, to keep warm) The application of warm water, or some medicinal concoction, to the skin by means of a sponge or flannel; this should be wrung out as dry as possible, and applied as hot as the hands can bear it, which may be

200° Fahrenheit, if a washerwoman or nurse, accustomed to great heat, make the application. A thick piece of flannel is perhaps best for the purpose, as it can be closely laid over a larger surface than a sponge; when put on the part affected it should be covered over with a blanket, which absorbing the moisture, is better than any waterproof material; let it remain on from three to five minutes, and have another flannel ready to take its place directly the first is removed; keep on in this way for about half-an-hour, when the fomentation may, for a time, be discontinued. In congestion, and the early stages of inflammation, it frequently affords great relief. Decoctions of Poppy Heads, Marsh Mallows, and other herbs are recommended for this purpose, and may be used, although, we believe, they possess few, if any advantages, over plain water, especially if it be soft.

FOMES, plural FOMITES (Latin for fuel). A term applied to substances imbued with *Contagion* (which see).

FOMES VENTRICULI is an old name for *Hypochondriasis* (which see).

FONTANAL (Latin *fons*, a fountain). The space left in the head of an infant where the frontal and occipital bones join the parietal. It is also called *Fons pulsatilis*, and more commonly *Mould*. See *Skull*.

FONTICULUS (same root). An *Issue*, (which see).

FOOD. This term comes from the old Saxon *fœdan*, and signifies, says Dr. Johnson, "anything that nourishes;" it may be either solid or liquid, animal or vegetable, and on its nature and quality, and the quantity taken, depends in a great measure the health of the community. What to eat and drink, and what to avoid? are questions often asked and often answered; but the rules of good feeding, as well as of good breeding, are constantly set at nought by those who prefer the indulgence of their appetites to the exercise of a sound discretion in dietary matters. We shall here endeavour, simply and clearly, to lay down a few general rules, in relation to this subject, referring our readers for directions, in particular cases, to the heads of the several diseases and states of health treated of in this volume.

Food, then, as we have said, is anything that nourishes—its use is to supply the kind of material which forms the bones, and muscle, and other constituent parts of the animal body; and to make good the waste caused by the circulatory, and respiratory, and other processes of life. It must be evident, then, that the state and condition of the body, and of the mind also—for thi has an intimate connection with the physical organization — must depend greatl upon the nature of the food taken.

Chemistry informs us that the principa constituents of the human body are th organic elements, carbon, hydrogen, oxygen and nitrogen, and it is the waste of thes which we are called on to supply by a sufficient quantity of proper food ; these are, i fact, the elements of nutrition ; we eat an drink them in various forms of combination and they maintain, in due proportion, th solid and fluid matters of the body. Th food which we take into the stomach, i there reduced by the process of digestio into a homogenous fluid (see *Chyle*), an then by the process of assimilation, it different elements are separated, and distributed through the system, each to giv strength and persistency to some particula tissue or organ ; thus, for instance, we ar constantly exhaling carbon, which is supplied to the lungs by the veins, at the rate as it has been pretty clearly ascertained, o about 13 ounces daily, and this is but on of the many instances of consumption o material which might be adduced. If ther be an insufficient supply of either of thes elements, there will be an imperfect development of the parts which it contributes t form and sustain, and ill health, arisin from organic disease, will, ere long, be th result. Not only do the various secretion used as food by man serve to build up th fabric of his body, and to supply the dail waste of tissue which is going on, but the also serve to keep up the animal heat withi the system, this in a healthy person is generally about 98° Fahrenheit; and it is alway a sign of imperfect digestion and assimilation, or of a want of nutrition, when it fall below this.

Whether vegetable or animal food is th fittest for man, has been a subject of muc controversy ; we are not prepared to ente deeply into this question, but it appears t us that a proper admixture of the two i the diet best adapted to supply the element necessary for the maintenance of perfec health ; true it is that a large proportion o the human race subsist chiefly, or wholly, upon the products of vegetation, and thes are by no means the least healthy and robust of mankind ; but then they are the inhabitants of warm climates, where so large an amount, either of nitrogen or carbon, is not required, as in cold or temperate climes. True it is, also, that the animals whose flesh is eaten by man, derive their nourishment from the vegetable kingdom, and therefore it may be said that on the nutrient properties of plants, both man and the lower animals subsist. To this latter argument it may be replied that, in passing through the animal system, the constituent principles of plants undergo a change, and that although man could undoubtedly, as many do, subsist, even in this climate, on a purely vegetable diet; yet, seeing that God has supplied animal food in abundance, and given man the inclination to eat of it, with teeth peculiarly adapted for its mastication, and other organs for its digestion and assimilation, it does appear plain, that man was intended to be an animal as well as a vegetable feeder, and that there is no reason why he should abstain from that which is both wholesome and pleasant to him, unless there is some higher law than that which relates to his physical wants and propensities, which enjoins abstinence from animal food; those who entertain this belief, of course, do right to be vegetarians. In "Lectures on the Food of Man," by Dr. Lankester, we find the following arrangement of the various substances which enter into the composition of human diet generally:—

1.—ALIMENTARY SECRETIONS.

A. Nitrogenous, or Nutritive Secretions.

Forms of Protein.

Vegetable Albumen.	Animal Albumen.
,, Fibrin.	,, Fibrin.
,, Casein.	,, Casein.

B. Carbonaceous, Respiratory, or Combustible Secretions.

Celulose.	Sugar-Alcohol.
Starch.	Oil of Fat.

2.—MEDICINAL SECRETIONS.

A. Organic Acids.

Citric Acid.	Malic Acid.
Tartaric Acid.	Oxalic Acid.

B. Volatile Oils.

Cinnamon.	Pepper.
Cloves.	Mustard.
Nutmegs.	

C. Alkaloids.

Theine.	Tea and Coffee. Paraguay Tea.	Theobromine.	Chocolate and Cocoa.

The nitrogenous secretions which are found in plants are all modifications of the principle called *Protein*, which is the basis of *Albumen*, *Fibrin*, and *Casein* (all of which see). Out of these secretions the flesh of animals — that is, the muscles, nerves, &c.—are formed; and, by feeding on such flesh, man obtains a supply of those principles which his system most requires, and in a form best adapted to his wants.

The medicinal secretions, although considered as articles of Food, do not contribute to the performance of any of the great functions of life, but they are of service in preventing or alleviating disease; such are the alkaloids contained in Tea, Coffee, Chocolate, &c., and the various spices which contain volatile oils; the use of these is, in most cases, rather occasional than habitual.

To provide for the artificial wants of men, there are various kinds of Food, some of which would at first sight appear not to yield any of the above named secretions; nevertheless, it will be found, on examination, that they do in reality belong to one or other of the classes named, and to exercise a due influence on the system. We have shown that the Food of man, as well as of the lower animals, is derived originally from the vegetable world; but there is one striking exception to this rule presented to our notice in *Chloride of Sodium*, or *Salt*, which appears to be necessary to the proper performance of the functions of the animal body. It has been suggested, that "this is probably the source from which is obtained the Chlorine which enters into the composition of the Hydrochloric Acid, existing in the gastric juice, which is secreted by the mucous membranes of the stomach during digestion."

We have now, as we trust, sufficiently prepared the way for a consideration of the different kinds of food, or, to use a comprehensive term, *Ingesta*—by which we understand both solids and liquids—taken by man: and first, with regard to solid food, both the nature and necessary quantity of which will vary considerably, according to the habits and occupation of the individual; but, as a general rule, it may be set down that a healthy man, taking ordinary exercise, should consume daily—of Meat, about ¾ of a pound; of Bread, the same; of Potatoes and other Vegetables, 1½ pound; of Cheese, 2 ounces; Butter, 1 ounce; Sugar, the same; Tea, ½ an ounce, or Coffee, 1 ounce. The Meat may, and should, be sometimes, changed for its equivalent in Fish, and, if Pudding or Pie be taken, so much Vegetables will not be required; a larger amount of solid Food than the above cannot be conducive to health, and is very likely, if persisted in, to produce actual disease, the more especially if the Food be of a rich and stimulating character. Females, whose habits generally are less active than those of males, cannot, as a rule, take, with advantage, above three-fourths, or, perhaps, half this quantity, nor can any person whose digestive powers are at all weak; it is of consequence that, by such, the kind of Food which contains the most nourishment in a small compass should be taken; we would, therefore, advise the reduction in the above scale to be made in the Vegetables, and the Cheese must be dispensed with, as indeed it may well be in all cases: we should perhaps have included Milk in the scale, for, although in a liquid form, it contains a considerable proportion of solid matter, from 2 to 4 ounces daily may be taken with advantage by a healthy, active person; those who require nourishment in a concentrated form may take at least double the quantity, and an Egg or two daily, if they find that they can digest it; light farinaceous Puddings are also good for such, and when these are obtainable, Vegetables may be altogether discarded.

"Eat little and often" is the advice commonly given to weak and delicate persons, but this advice should be taken, like the Food, with discretion; one who can sit down at meal times, and take Food with enjoyment, although it be but small in quantity, should only, as a rule, eat at these times; there can be no objection to a biscuit, or something light, between meals, if there is a sense of faintness, but it is best to wait until the regular periods if possible, and these should not be more than three, or at most, four hours apart; with regard to the best times for eating. See *Meals*, *Breakfast*, *Dinner*, *Tea*, *and Supper*.

There are many persons whose means will not allow of their taking Animal Food once a day; it is not desirable for any, except convalescents, to take it oftener. The following is the cheapest dietary table on which a man actively employed, and so circumstanced, ought to subsist:—Bread 1 pound, Potatoes 2 pounds, Cabbage or Greens of some sort, 1 pound, Peas or Beans 4 ounces; boil the vegetables, then fry them in Lard, 4 ounces; divide the mess into two meals; with the first, take a third portion of the Bread, with the second a like portion, and eat the remainder of the Bread with 2 ounces of Cheese, or a little Dripping, or Treacle, or perhaps a Herring; occasionally the Vegetables may be made into a quart or so of Soup, with a $\frac{1}{4}$ of a pound of fat Pork, thickened with a handful of flour or oatmeal; but too much of this would be likely to produce flatulence, and, perhaps, a relaxed state of the bowels. Bread and milk for breakfast, bread, or it may be potatoes and pork, nearly all fat, for dinner, and thick oatmeal porridge for supper, is the common diet of our farm labourers, than whom, generally speaking, no class of men can be more hearty and robust; but this dietary would scarcely suit any one not very actively employed in the open air; it contains a large proportion of the most nutritious principles, but it requires strong powers to digest and assimilate them.

As a wholesome and nutritious Food for children, suitable for those of limited means, we can recommend the following:—Take of Scotch Oatmeal $\frac{1}{4}$ of a pound, boil it in a pint of Water for about half an hour, stirring it the while; then add a pint of Milk, and sweeten with 2 ounces of Treacle; this will serve one child for breakfast and supper; for the mid-day meal, give about a pound of boiled Potatoes and Greens, and 2 ounces of Bacon; of course, if a $\frac{1}{4}$ of a pound of Beef or Mutton can be afforded, so much the better.

As a rough calculation, founded on chemical analysis, we may state that 5 pounds of Rice, 4 of Potatoes, $1\frac{1}{2}$ of wheat Flour, or 2 pounds of Bread or Oatmeal, may, either of them, be taken as an equivalent to $1\frac{1}{4}$ of Beef or Mutton of the average degree of fatness, in the production of muscle; if this is borne in mind, it is easy to estimate how much of either description of food would represent, in point of nutrition, a given quantity of any other kind which it might be impossible to procure, or necessary to withdraw from the dietary table on account of its being unsuitable for a particular case, or for any other reason; thus, if we take away a pound of Meat, nearly 2 pounds of Bread will be required to supply the same amount of nutrition, and so on.

We should bear in mind, too, that there are certain mineral elements contained in the articles used as food, both Vegetable and animal, which are necessary adjuncts in the several processes of our internal economy; hence it is desirable that these alkaline and other chemical principles should not be lost in the cooking; soups and gravies, made with the water in which meat and vegetables are boiled, contain a large proportion of these elements, and therefore their frequent appearance on the table is desirable; the weakly stomach will have some difficulty in digesting them, and for this reason they cannot be habitually taken, except by the strong and hearty. If the nutritive principles of any kind of food are presented to the stomach in too concentrated a form, as in jellies and very rich soups, cream, custards, &c., they will be almost sure to disagree, as will meat, eaten without a due proportion of bread or vegetables, unless under some peculiar circumstances,—as in very cold climates. Great mischief arises from taking an undue quantity of stimulating food, and also from swallowing it hastily and partially masticated; the digestive organs have more than their proper work to perform, and naturally rebel; hence we have imperfect assimilation, fermentation, and chemical change, converting nutrients into poisons, and tending to *Dyspepsia*, *Constipation*, and *Hypochondriasis* (which see). The Temperance movement ought to include eating as well as drinking, for gluttony has its numerous victims as well as inebriety.

Having disposed of the more solid part of our subject, it behoves us now to speak of *Liquid Food*, which is no less necessary to the support of the bodily powers; indeed we believe that extreme thirst, as the feeling resulting from the want of fluid ingesta is called, can be less easily borne than hunger, showing that the system suffers more from a deprivation of liquid than of solid aliment. The various forms of the former which are chiefly taken in this country may be classed under four heads, viz.—1st, *Diluent Drinks:* including simple Water, which is, no doubt, the natural drink of man as of all animals, and its numerous modifications, such as flavoured beverages, &c., which we need not pause to particularize; of these nature requires a constant and liberal supply, and we do well to comply with her demands, and satisfy the feeling of thirst whenever it arises, but not with stimulating liquids, which will afford but a momentary satisfaction, and cause the demand to be repeated more strongly and importunately in a very short time; 2nd, *Nourishing Drinks*, such as Broth, Beef-tea, Gruel, and Milk, which last is indispensible for the support of infant life: adults, in a state of health, do not really require any of these, but in cases of sickness, where solid food is inadmissible, they are the only mediums of nourishment to the system; 3rd, *Stimulating Drinks*, the *abuse* of which has led to such widespread ruin and frightful misery in our own and other countries, that many good and philanthropic men have agreed to denounce them altogether as sources of unmixed evil: we cannot bring ourselves so to regard them; our medical experience proves to us that there are many cases in which, if not absolutely necessary, they are extremely useful, enabling persons to perform certain duties on which their livelihood depends, and supporting the exhausted powers of those who, in the great struggle of life, are ready to sink beneath their heavy toils and burdens. We are quite aware that in themselves these drinks contain little, if any, real nutrition, certainly none which might not be conveyed to the stomach in other, and perhaps purer forms, but the cases to which we allude are those in which the stimulus is absolutely required, and it seems to us that we ought to adminster it in the most agreeable form: true it might be given as medicine, but why should those to whom it is really a a necessary of life be debarred from taking it in the pleasanter way, because it is liable to abuse?—the same argument might be used for abstinence from all the creature comforts which a beneficent Creator has provided for man. Thus much we have felt it our duty to say upon the great temperance controversy, which has of late divided public opinion. For ourselves, we prefer water as a common beverage, and invariably drink it, feeling assured that it satisfies thirst better than any other liquid, and also fully supplies the wants of our bodily condition. We would have all our readers water-drinkers, simply because we would wish them to be strong and healthy, and not overtasked, so as to become exhausted and require the arousing effect of stimulants to enable them to perform the work from which they dare not shrink. But, alas!

"The world is too much with us, late and soon;
Getting and spending we lay waste our powers."

We have deviated far from the simplicity of nature; we are living in a highly artificial state of society, and in many cases can no more subsist on the pure liquid element, than we can on the roots and berries, and other products of uncultured lands, on which our forefathers chiefly subsisted: still, we say, let none habituate themselves to stimulating drinks who can possibly do without them, for they are the bane of civilized life; under their influence all ties, social and domestic, are rent asunder, religion is set at nought, and man becomes a perfect demon.

For a more particular account of the nature and properties of these Drinks, (see *Alcohol*, *Ale*, *Beer*, *Wine*, and *Spirits*).

In the fourth division, we place such drinks as Tea, Coffee, Cocoa, &c., the use of which has of late years obtained so largely among all classes of this country; their action on the system is nearly the same, depending on principles of a very similar character, which chemists have agreed to call *Theine*, *Cafeine*, *Theobromine*, &c., (all of which see): the operation of these appears to consist in arresting for a time the undue progress of excretion, or wasting of the animal tissues, which goes on during, and after, active exercise of the bodily or mental powers. Hence their refreshing and invigorating effect on the toil or care-worn man; we have all experienced this, and can estimate aright the value of a good cup of Tea or Coffee, which at once soothes and strengthens us, without causing the reaction and depression which invariably comes after the use of alcoholic stimulants. Those who have been long accustomed, like ourselves, to severe mental exertion, know well the assistance which is afforded by this kind of beverage, which also may be safely given in cases where the excitability of the brain, or inflammatory tendency, render any alcoholic stimulant extremely dangerous.

Food for Infants. To mothers and nurses this is a most important branch of our subject; we shall therefore devote to it as much space as we can, consistently with the general plan of our work, and we shall devote that space more to practical receipts than to general remarks. Let us begin with articles of Food suitable for Infants of from 3 or 4 months, to 2 years of age. Generally speaking, for the first 6 months of infantile existence, the mother's milk will be quite sufficient nutriment, if there is a plentiful supply of it; and, indeed, if the child appears to thrive, this may be all that is required for the first year; should there be an insufficient supply of this, or should it appear not to agree well with the infant, it should be alternated with artificial Food, or discontinued altogether, in either case the question of *what* Food? will have to be considered. The substitute nearest in character and quality to the maternal fluid is Cow's Milk, diluted with about a third of pure water, and sweetened, just a little, with lump sugar; this should be given in a feeding bottle, about blood-warm, every two hours or so for a very young child, say under 6 months; every 3 hours, for one above that age: if put into the bottle the last thing on going to bed, and laid under the pillow, wrapped in flannel, it will keep warm enough; should this not be sufficiently nutritious, a tablespoonful of Beef Tea or Mutton Broth, made without spice or salt, may be added to each draught of the Milk. Some thick Food will also be required, and this may be made with Baked Flour, Biscuit Powder, Tops and Bottoms, or Rusks: of the former, Hard's Farinaceous Food is a good and convenient form; it should be first mixed up with cold water, then, after having boiling Water poured upon it, simmered for ten minutes, until it thickens, then reduced with Milk, and sweetened: the Biscuit Powder may be prepared in the same manner, as may Arrowroot, to be given if the bowels are at all relaxed, in which case it will be well to boil a small piece of Cinnamon in the Milk; if whole biscuits are used, or any other of the various forms of highly-baked bread, such as those above-named, they should be first boiled in water for a ¼ of an hour, strain off the Water, and rub the pulp through a sieve, keep it in this way, and warm in a pannakin when wanted, adding a little Milk and Sugar.

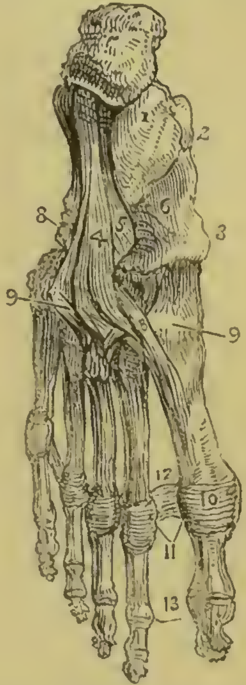
A light nutritious Food may be made with Pearl Sago, or Semolina, either of these should be boiled in Milk, until thickening takes place, strained and sweetened: care must be taken in all these foods not to put much sugar, as it is apt to produce acidity of stomach and flatulency. If the bowels are confined, as is sometimes the case when flour is much given, let a change be made to Barley Gruel; Pearl Barley, or the prepared grain, known as "Robinson's," should be used; they should be boiled in water, strained and mixed with Milk, like the Biscuit food: Rice Gruel is also useful in cases of relaxed bowels; prepare it as follows:—wash a small cupful of Rice, and boil it in a quart of Water for two or three hours, strain off the liquid from the grain, and put it by in a cool place, when wanted for use mix enough for once with an equal quantity of Milk, and sweeten; Brown Sugar should be used if the bowels are much constipated; or Treacle, which is yet more relaxing; should these not have the desired effect, put in a small piece of Manna instead of Sugar; Gelatine or Isinglass may be added to either of the above foods, except those made with Broth or Beef Tea, where the child does not appear to thrive upon Milk and Farinaceous diet alone. With young children, Bread and Milk rarely agrees, but it is a good Food once a day for those above the age of three years, who are strong and healthy; the bread should be two days old and of good quality; unless the Milk is very good, the water in which the bread is boiled, should be strained off before the milk is added.

Children after the age of 2 or 3 years have advanced beyond spoon victuals, into the age of meat and puddings; the former (Mutton or Chicken) should be well cooked, and cut up small, take Bread with it; no young child should eat Potatoes, nor any other vegetables; but little fruit should pass the lips before the age of 5 or 6, and then only a little, and of the most digestable kinds. (See *Fruit.*) If Bread and Butter be taken, it should be very thinly spread. As to *Puddings* (see that head); observe that those made of flour and suet, or any kind of fat, should never be given to children under 7 or 8 years of age, and to these but little; Rice, Arrowroot, Sago, and other Puddings of that sort are best. Pie crust is but another name for poison.

FOOT. (Latin *pes.*) The beautiful and complicated structure of the human foot, has often been dwelt on by anatomists, and, like the hand, so eloquently described by Sir Charles Bell, in his "Bridgewater Treatise," it is worthy of our most careful study and inspection. As the organ by which locomotion is accomplished, it is of the greatest utility to man, and, of course, its preservation from disease and injury, is to him of the utmost importance. We do not expect to make our readers acquainted with all the niceties of its construction; but we shall endeavour to give them some idea of the position and arrangement of its several parts, that they may the better understand the nature of the accidents which are likely to befal it, of the diseases to which it is subject, and thus be prepared to apply the proper remedial means, with sufficient intelligence to render them effective. We would call attention, first, then, to the bony structure and ligaments, as exhibited in the diagram annexed, which represents the sole or bottom part of the foot.

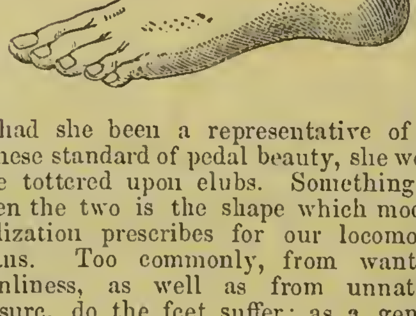
We should premise that the bones of the foot consist of the *Tarsus* or instep, *Metatarsus*, and *Phalanges*, or toes. The Tarsus is composed of 7 bones, namely, the astralagus, os calcis, navicular bone, cuboid bone, and 3 cuneiform bones; these are set together, so that they cannot be moved by any slight force, and yet have considerable elasticity. The astralagus is that on which, through the tibia—the great bone of the leg, best known as the shin bone—the weight of the body first falls. The os calcis is the heel-bone. The Tarsus and Metatarsus together, contribute to form an arch, of which the supports are the os calcis behind, and the ends of the metatarsal bones before; it is, indeed, a double arch, for it has at the sole a concavity both from back to front, and from side to side; and the strength with which its parts are joined is so great, that few accidents are rarer than a fracture or dislocation of any of the bones of the Tarsus.

The rest of the bones of the Foot, including those of the metatarsus and the toes, are in number, arrangement, and form, very similar to the metacarpus and phalanges of the fingers. The metatarsal bones, however, are longer, more slender, and set more closely side by side than the metacarpal; and the phalanges are all much shorter, and (except the two of the great toe) smaller. Their movements in general are the same as those of the fingers, but less extensive; neither is there any adaptation for so free a movement of the first toe as of the thumb. Having thus pointed out the relative positions of the bones, we will proceed to speak of the ligaments with which they are connected, a reference to which in the diagram will give all further information which may be required as to the bones themselves. No. 1 is the Os calcis; 2, the Astralagus; 3, the tuberosity of the Scaphoid Bone; 4 is the long Calcaneo Cuboid Ligament, a band of ligamentous fibres which proceeds from the under surface of the os calcis to the rough surface on the under part of the Cuboid Bone, its fibres being continued inwards to the base of the third and fourth Metatarsal Bones; 5 is part of the short Calcaneo Cuboid Ligament, which is situated closer to the bones than the long Plantar Ligament, from which it is separated by adipose tissue; it is broad and extensive, and ties the under part of the os calcis and cuboid bone firmly together; 6 is the Calcaneo Scaphoid, which, like the two last named, belong to the Plantar series of ligaments: this forms a broad band, which, passes forward from the hinder and inner border of the os calcis to the edge of the scaphoid bone, connecting these two bones, supporting the Astralagus, and forming part of the cavity in which the rounded head of the latter bone is received; 7 are the Plantar Tarsal Ligaments; 8 is the tendon of the Peroneus Longus Muscle; 9,



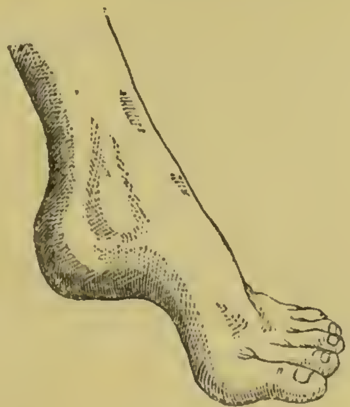
the Plantar Tarso-metatarsal Ligaments; 10, Plantar Ligament of the Metatarsal-phalangeal Articulation of the great toe; 11, Lateral or Side Ligaments of the same; 12, Transverse Ligament; 13, Lateral Ligaments of the Phalanges of the great toe; the same ligament extending to the other toes also. There are also 5 Interosseous (between the bones) Ligaments, which are not seen in the diagram: they are short and strong, uniting the several bones solidly together.

The movements of the Foot, which are effected by the several muscles, and permitted by their connecting ligaments and tendons, are—1st, between the Astralagus and Os calcis, a slight degree of gliding backwards and forwards, and from side to side; 2nd, a very trifling motion of the second range of tarsal bones; and adduction and abduction, flexion which increases the arch of the foot, and extension which flattens the arch between the first and second range. And this is the beautiful structure which is so commonly pinched up in tight boots, and misused in all kinds of ways, that, as an eminent surgeon has observed, "it is the rarest thing to find a Foot, the bones of which have not been injured by these malpractices." We would appeal to the common sense of our readers, and ask, if it is not far better to have a large foot, than a deformed one? better the free, bounding step of the red Indian, than the crippled gait of a Chinese woman, or a corn-afflicted votary of fashion. We have shown that the Foot is constructed on the principle of a double arch, one lengthways and the other across; when it is on the ground, and bearing the weight of the body, these arches are pressed out, so that they become nearly flat, but when the pressure is withdrawn, and the Foot uplifted, they again assume the arched form. Here is alternate expansion and contraction, for which there must be room, or there will be derangement of the machinery, such as we constantly see in the misshapen masses of bones, muscles, and integuments called feet, covered with corns, and morbid growths of various kinds, all the result of pressure, occasioned by shoes made too tight to admit of the necessary play and movement of the bones. If a person has naturally a large Foot, it is the veriest folly to attempt to make it small by compression; nature rebels at such an attempt, and avenges herself by distortion, and other pains and penalties, such as corns and bunions, and inflammation and swelling at the joints; if the shoe is too small, there will be bulging somewhere and a malformation, the instep will seem to be running over the top, and the soles of the feet appear to be roun instead of flat; the wearer will be afraid t step firmly and confidently, and there wil be an end of all grace of motion, and comeliness of shape, in the part so tortured an afflicted. The general length of the femal foot is from 9 to 10 inches, the width 2½ o 3 inches, the circumference taken at th centre of the long arch may be 7 or 8 inches the average of the male foot is about an inc more every way, and it usually is muc flatter at the bottom; the arch is mor flattened, permanently, because it ha greater, and more constant pressure on it. The Medicean Venus never wore tight shoes and her foot is like this, as nature moulde it; had she been a representative of the Chinese standard of pedal beauty, she would have tottered upon clubs. Something between the two is the shape which modern civilization prescribes for our locomotive organs. Too commonly, from want of cleanliness, as well as from unnatural pressure, do the feet suffer; as a general rule we do not wash them often enough, they are so clothed and covered, that the perspiration cannot escape, nor is it absorbed so completely as in most other parts of the body, hence arises that unpleasant effluvia perceptible when the feet are uncovered. The only remedy for this is cleanliness; wash the feet every night in tepid water with soap, change the stockings often, and have two or three pairs of shoes in wear. *Damp Feet* should at all times be carefully guarded against, as they are likely to strike a chill to the system, which may set up Fever or other inflammatory disease. *Cold Feet* are indicative of impeded circulation; if they are habitually so, it is best to wear woollen socks, and to put them, on going to bed, in a mustard foot-bath, they should also be well rubbed with a flesh brush, or coarse towel; persons who are affected in this way, are generally troubled with *Chilblains*, (which see), also *Corns* and *Bunions*. For the accidents which are



likely to befal the Foot, see *Dislocations*, *Fractures*, and *Sprains*.

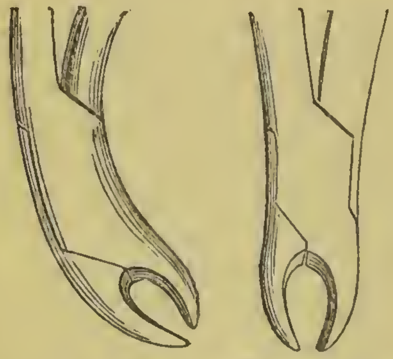
Club Feet, which we sometimes see in children, are nearly always congenital, that is, dating from birth; they are caused by the greater contraction of some muscles than others, by which the foot is drawn out of its natural position; it may be inwards or outwards, although the former is most frequently the case; or it may be a complete elevation of the heel, as in the following cut, so that the patient in walking rests completely on the toes; this is the most simple form of distortion; it is commonly called the *Horse Foot*, and is not so frequently congenital as the other forms; it may arise from some disorder of the system, and especially from nervous irritation, like that produced by teething or worms: it is frequently accompanied by weakness of the ligaments of the ankle-joint, and in this case if not soon attended to, the foot is likely to become so distorted that the patient in walking rests merely upon the outer edge. *Splay* or *Flat Foot* may arise from nervous debility, or from the carrying of heavy loads, which necessitate a great amount of pressure upon the arch of the foot, which becomes flattened in consequence. There are many mechanical contrivances for the cure of these various deformities, which do not amount to malformations, as in most cases the bones are merely drawn out of their natural position; but the best method is that lately practised of a sub-cutaneous division of the contracted tendons; it is recommended by Mr. Tamplin, Surgeon of the Royal Orthopædic Hospital, as well for infants of the earliest age as for those grown up;—" first, from the facility with which it is accomplished; secondly, because it incurs comparatively no risk, and scarcely any inconvenience; and thirdly, because you at once overcome the principal resistance, and render the after treatment painless to the patient, and comparatively easy to the attendant, independent of which the child is not subjected to such constant confinement of the limbs as is absolutely necessary when you do not have recourse to an operation. You can allow exercise to be taken for a certain time during the day—and that, even in infants, must have a most beneficial effect." Let every mother, then, who has a child with a deformed foot at once consent to the performance of an operation which is almost sure to be successful, and which involves at the time but little pain, which leaves no external wound, and involves no loss of blood (see *Orthopædy*).

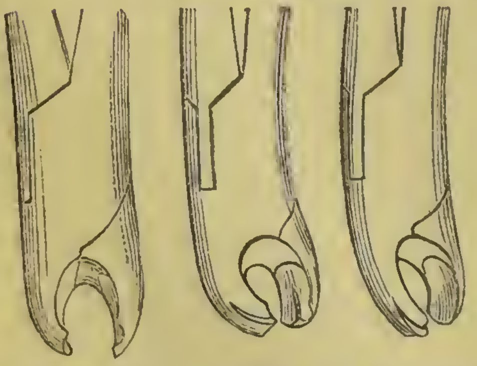


FORAMEN (Latin *foro*, to pierce). Hence we have *F. Monroianum*, an opening under the arch of the fornix, by which the lateral ventricles communicate with each other, and with the third ventricle. (See *Brain*.) *F. Soemmering*, or *centrale*, a circular opening at the hinder part of the retina, exactly in the axis of vision. (See *Eye*.) *F. ovale*, an opening situated in the partition between the right and left auricles in the *fœtus*. *F. rotundum*, the round aperture of the internal *Ear*, (which see). This and the preceding term are respectively synonymous with *Fenestra ovalis* and *F. rotunda*. *F. cæcum*, the blind hole at the root of the spine of the frontal bones, so called from its not perforating the bone or leading to any cavity. (See *Cæcum*.) *F. cæcum of Morgani*, a considerable depression of the *Tongue* (which see). *F. supra-orbitarium*, the upper orbitary hole, situated at the ridge over which the eyebrow is placed. (See *Eye*.) *F. magnum occipitis*, the great opening at the under and fore part of the occipital bone. (See *Head*, *Skull*). Then, too, we have *F. incisivum*, the opening immediately behind the front *Teeth* (which see); and are several other smaller holes in various parts of the human body, to which the term Foramen is applied, but we need not particularise them.

FORCEPS. Are instruments commonly used in surgical operations of various kinds, and constructed according to the purpose for which they are intended; their chief intention being to hold substances which cannot conveniently be held with the fingers, the principle of construction is in all cases the same, being that of a pair of pincers with two blades, either with or without handles. The Forceps used in the operation for cataract are the smallest made; a larger size is employed for securing the mouths of arteries that require a ligature round them; this instrument is provided with a spring catch, which keeps its points closed upon the artery; persons living at a distance from medical aid, and especially emigrating colonists, will do well to be provided with such, as in wounds involving the severance of an artery, it is comparatively easy, by this means, to stop the bleeding. The common dressing Forceps, found in every surgical case, are figured at page 199, under the head *Dressing of Wounds.*

For tooth drawing, Forceps have nearly superseded the use of the Key, and in the hands of a skilful operator it is a most efficient instrument; great attention is paid to the construction of these; they are of hard steel, beautifully finished and of various shapes, according to the particular teeth for which they are intended. The following cuts represent some of the forms in use; and under the head of *Teeth Drawing*, more probably will be given. There are Cutting Forceps constructed with the edges in the same line as the handles—these are sometimes called Bone Nippers, a name which sufficiently explains their use; and larger Forceps for the extraction of polypi; and others of different sizes and construction employed in the operations of *Lithotomy* and *Lithotrity* (which see). There are also Forceps for *Craniotomy* (which see), and Midwifery Forceps, and small Forceps with very fine hollow, serrated points, very useful for the extraction of splinters. The following cuts are representations of some of the most approved forms used for these purposes:—1. Artery Forceps; 2





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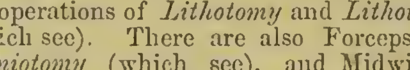

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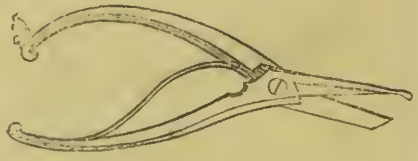

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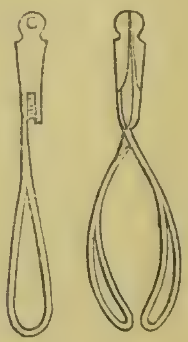
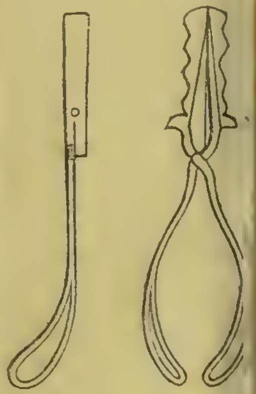
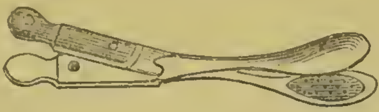




7.

Splinters; 3. Cutting (for removing starch bandages, &c.); 4 Polypi, or Hæmorrhoids; 5 and 6 Midwifery, 7 and 8 Craniotomy.

8.



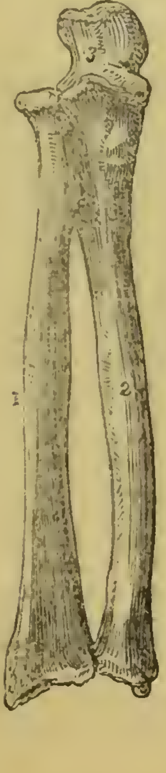
The derivation of the term Forceps appears to be from the Latin, *ferrum* iron, and *capio* to take, quasi *Ferriceps.*

Formic Acid (Latin *formica*, an ant). An acid emitted by ants when irritated; it contains a portion of Malic as well as Formic Acid; it is a colourless fluid, of a pungent smell, and acrid taste; it may be prepared artificially; neither it, nor the *Formiates*, which, combined with certain bases, it produces, are much used in medicine or the arts.

Formic Ether. Is a colourless liquid, having a strong smell of peach kernels, and a very peculiar taste; it consists of Formic Acid and Ether.

Formica. Is a term applied by the Arabians to the disease now called *Herpes* (which see); its insiduous, creeping character is supposed to have given occasion for the ancient name.

Fore-Arm. The lower part of the arm between the elbow and the hand; it consists of two bones, as shown in the diagram, 1 being the *Ulna*, and 2 the *Radius*, 3 shows the joint or articulation between them and the upper bone of the arm; these bones are very liable to *Fracture*, (which see); in children, being soft and cartilaginous, they are often bent without being broken.



Formula (Latin *forma*, a form). The mode of preparing medicines as directed in the Pharmacoplisa. or prescribed extemporaneously. See *Prescriptions.*

Fornix (Latin for an arch or vault). A flat triangular medullary body, supporting the *septum lucidum* of the *Brain* (which see).

Fossa (Latin *fodio* to dry). A little depression or sinus; thus we have *F. hyaloidea*, the cup-like excavation of the vitreous humour in which the crystalline lens is embedded (see *Eye*); *F. lachrymalis*, a depression in the frontal bone for the reception of the lachrymal gland (see *Eye*); *F. navicularis*, the dilation towards the extremity of the spongy portion of the *Urethra* (which see); *F. ovalis*, the oval depression presented by the septum of the right auricle (see *Brain*); *F. pituitaria*, the *sella turcica*, a cavity in the sphenoid bone for receiving the pituitary body (see *Skull*).

Four Tailed Bandage. A bandage for the forehead, face, and jaws, sometimes called the Bandage with Four Heads (see *Bandages*).

Fourth Pair. The *Nervi Patheticai*, the most slender of any of the human body (see *Nerves*).

Fowl. We have spoken of Fish and Flesh, and must not omit the most aristocratic, if not the most generally useful of the grand dietetic trio. Than a young and plump barn-door fowl, there is perhaps nothing more delicious, as well as wholesome, in the whole range of culinary delicacies; the flesh is white and tender, not too fibrous, and has in it but a small proportion of the oleaginous principle; it is therefore easy of digestion, and may be taken by those with whom the strong meats would be apt to disagree: for those who after a severe illness, are just allowed to commence animal food, the broth and the flesh of the chicken is the very best diet that can be given, alternated, perhaps, with fish and tender mutton; it is not so stimulating to the system as the flesh of the larger animals, neither is it so nutritious; but it is as much as the weakened powers are equal to. Of Poultry in general, we shall speak more at large when we come to that head; in the mean time, we quote from Liebig's

"Chemistry of Food," an axiom in reference to this particular kind:—"In the boiling or roasting of Poultry, the flesh of which is white, and contains little blood, the temperature of the inner parts, when the flesh has been well cooked, seldom exceeds 130° to 140°. The flesh of Poultry or Game, is, therefore sooner dressed than flesh which contains much blood, as beef and mutton." We should observe, that the flesh of fowl is better boiled than roasted for invalids; and there is the additional advantage of using the liquor as *Broth;* (for the preparation of which, see that head). The following is a good recipe for *Chicken Panada*, an excellent food for invalids, containing much nourishment in a small compass:—"Boil a chicken till about three parts ready, in a quart of water; take off the skin, cut the white meat off when cold, and put into a marble mortar; pound it to a paste with a little of the water it was boiled in; season with salt, or grated nutmeg, and the least bit of lemon peel: boil gently for a few minutes to the consistency you like; it should be such as you can drink, though tolerably thick."*

FOWLER'S SOLUTION. This preparation was first introduced in legitimate practice by Dr. Fowler, of Stafford, as a substitute for "the Tasteless Ague Drop;" at one time a highly popular nostrum. Dr. Fowler's is a solution of the Arsenite of Potash, coloured with Compound Spirit, or Tincture of Lavender; one drachm of it contains ½ a grain of Arsenious Acid. See *Arsenic*.

FOXGLOVE. A plant of the natural order *Scrophulariaceæ*, called by botanists, *Digitalis Purpurea:* properties narcotic, diuretic, and sedative, generally causing a marked diminution of the force and frequency of the action of the heart. In undue vascular excitement, in heart affections generally, in some fevers, in inflammations, as well as in hæmorrhages, in dropsy, phthisis, epilepsy, and scrofula, it is very useful, but its action must be carefully watched, and its use suspended as soon as it affects the head, stomach, or kidneys. The dose of the Powdered Leaves is from ½ a grain to a grain, gradually increased to 2 or 3 grains; of the Infusion from 2 to 4 fluid drachms, increased to a fluid ounce, and sometimes half as much more; Tincture, from 10 minims, very carefully, to 20 or 30; Extract, ½ a grain to a grain. There is a Pill of Digitalis with Squills, according to the Edinburgh Pharmacopœia, of which from 4 or 5 to 10 grains may be taken at bed-time; it is a good soothing expectorant.

In the form of Ointment, Foxglove is applied to scrofulous sores with good effect; the Tincture, with Soap Linament, may be rubbed into the chest or other parts to relieve pain; and a strong Infusion of the leaves may be applied warm to the abdomen to produce diuresis in dropsy. The active principle is extracted in the form of *Digitaline*, said to be 100 times as strong as the powdered leaves: dose 1-65th of a grain. It may be had as granules, each containing the above quantity; 2 or 3 of these may be taken per day. See *Digitalis*.

FRACTURE (Latin, *frango*, to break). One of the commonest accidents to which all are liable, is a fracture of one or other of the bones, which is often produced by a slight fall, or some other trifling accident, especially in very cold weather, when the bones are more brittle than at other times; and yet very heavy falls frequently occur without a fracture of any part of the osseous system, that being the result of some sudden concussion, or violent strain upon a part of the frame which is unable to bear it, consequently snaps short off; breaking more longitudinally, generally, in this case than in splinters. According as a fracture has a *transverse*, *longitudinal*, or *oblique* direction, in relation to the axis of the bone, it is distinguished by these terms: it is also called,

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* For other useful receipts of the kind, see "Wife's Own Book of Cookery."—Ward and Lock.

1st., *Simple*, when the bone only is divided, without external wound; 2nd., *Compound*, when there is the same kind of injury, with laceration of the integuments; 3rd., *Comminuted*, when the bone is broken into several pieces; 4th., *Complicated*, when attended with disease of the part, contusion, or other mischief. Then we speak of the *causes* of fractures as, 1st., *Predisposing*, with regard to the age, &c. of the patients, their diseases, and the situations and functions of the bones involved; 2nd., *Remote*, as regards the external force of falls, blows, &c., or the violent action of the muscles, attached to bones. And, again, for the reduction of fractures we make use of, 1st., *Extension*, which means the act of pulling the broken part in such a direction as to extend the muscles, and bring the ends of the bone into their natural position; 2nd., *Counter-extension*, pulling or extending in the opposite direction, in order that the extending power may not draw along the whole of the fractured limb, and thus prevent the desired object of bringing the two ends of the bone together; 3rd., *Coaptation*, or setting, that is, the act of placing the broken ends in their proper situations. When Fractures occur in, or near, the middle of the long bones, such as those of the leg, thigh, arm, or fore-arm, they are readily detected, even by the eye and hand of one unskilled in anatomy: there is always great pain and loss of power over the portion of the limb below the Fracture, which will hang loosely, and may be moved in almost any direction; without reference to the proper action of the joints; the broken ends of the bone, too, will be quite perceptible to the feel, and there will be a grating sound when they are moved about, called *Crepitation* (which see). In many parts, however, as near the joints, and where there is much muscle, the symptoms are not so plainly marked, and it is often extremely difficult for even a surgeon to make out the exact position of a Fracture, even if he has sufficient assurance that such is the nature of the injury, and this difficulty is increased by the swollen and inflamed state of the parts.

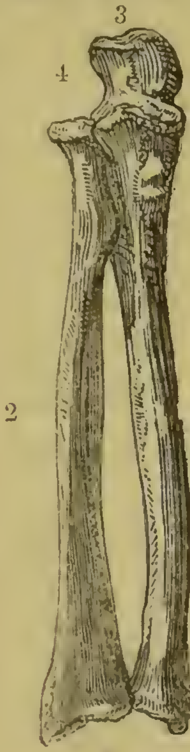
The desirability of obtaining professional assistance in all cases where there is a likelihood of a Fracture having taken place, must be so evident to our readers, that we need scarcely insist on it; frequently, however, this cannot at once be procured, if at all; it therefore behoves those who would stand prepared for such an emergency, to make themselves acquainted with the principles of treatment, and modes of operation necessary in cases of this kind. We shall endeavour to furnish just the information which may be required, to enable a non-professional person to treat a real or suspected fracture; if not exactly *secundum artem*; yet so as to give the patient a chance of obtaining relief from his pain, and perhaps a cure for the injured part. Our readers will be all the better prepared to receive and apply this information, if they understand something about the process by which Nature repairs the injury done to the bone, and by implication, to the whole frame, by a Fracture. The union in this case, does not take place by adhesion or granulation, like that in which some soft parts of the body are divided; neither is it, as some have supposed, by the effusion of blood in the intervals of the broken ends of the bones, and its subsequent organization; it being quite certain that bone will unite when no blood is effused, and that when it is, absorbtion often takes place before the process of union commences. The true explanation of the matter seems to be this—Inflammation is set up, as a first step to the repair of the injury, about the seat of which a considerable swelling occurs; this is generally hard and firm, and hence it has been technically called *Callus* (which see.) By this term, too, we understand not only the outward swelling and irregularity, but also the internal effusion of substance, by which the Fracture of a bone is consolidated; thus we speak of bones being united by *callus*, and when we proceed to inquire into the process by which this union is effected, we call it an investigation of the formation of *callus*. The notion is entertained by many that a gelatinous fluid, the result of inflammatory action, is poured into the space, between the broken bones, and becoming organized, as it were, glues them together, until by the effusion of the mineral elements deposited by the blood vessels which run through the substance, it ossifies, and makes the broken bone as firm and sound as before. But this like the sanguineous effusion theory, will not bear the test of modern science. The French chemist Dupuytren, who has directed particular attention to this subject, has discovered that when two ends of a broken bone are brought together, and maintained in accurate apposition, they become, in the first instance, united by a swelling, which consists of the periosteum, the cellular substance, the muscles, and other soft tissues about the injured part: this swelling forms a kind of tumour, which is thickest around the fracture, and gradually diminishes on either side, until lost in the natural surface of the bone, whose broken ends are held together by this case, if we may so call it, until they become consolidated by the ossification of the intervening substances. *Cal provisionel* and *cal defini* (the provisional and definite callus) are the names given by Dupuytren to the first union, produced by the swelling, and the second, by ossification of the bone. The second process generally commences from the 20th to 25th day after the occufrence of the accident, and extends from the 40th to the 60th day; but it may be much retarded by constitutional weakness, or other unfavourable circumstances; so that, in some patients, it is several months before the ossification becomes firm enough to use the injured limb in the most careful and gentle manner. By the end of the fifth or sixth month, the external swelling has become completely ossified, and a bony connection has taken place between the broken ends, so that, if sawn through, a faint line only marks the situation of the Fracture. Generally, by the end of the first year, the external, or provisional callus is entirely absorbed, and the bone has become so firmly united that it can be more easily broken at another place than at the seat of the Fracture. Thus it is that Nature repairs broken bones, leaving to man the task only of keeping the two ends in proper apposition, and affording to the system due rest and nourishment, without which she will refuse to perform her part of the duty—that is, in a workmanlike manner. It sometimes happens that the broken ends of the bone are not properly brought, or kept together; and even in this case, an union will probably be formed, but it will be by means of the first, or provisional process, only, and the swelling—the external callus—becomes ossified, and permanently remains. Perhaps the ends of the bone may even ride upon, and overlap each other; sometimes they are an inch or two apart, and yet the bone becomes consolidated, so that the patient can use the limb almost as well as if there had been no Fracture, so extensive are the resources of Nature. Such a connection as this, however, is generally very inconvenient to the patient, and a sad eyesore to the surgeon; and when, from neglect in the first instance, or restlessness, or other cause, it has occurred, or is likely to occur, the latter generally prefers to fracture the limb afresh, in order to effect a more sightly and convenient union; and it is best to let him do so, if sufficient reliance can be placed upon his skill and experience. It must not always be concluded that because the bone of a limb has received extensive injuries, amputation is necessary; better a natural limb, although it be somewhat stiff and misshapen, than an artificial one, however beautifully made; Nature, we have seen, is fertile in expedients, and there are extensive powers in bone for repairing injuries. Still, there are many cases in which the removal of a fractured limb is absolutely necessary for the preservation of life; so it is, when mortification and gangrene ensues, then the saw and the scalpel must be resorted to, and the danger of a formidable operation boldly met; loss of limb is a less evil than loss of life; both alternatives are dreadful; but how much more so is the latter than the former; besides, our life is not our own, and we should make every effort to preserve it until it pleases God to call upon us to lay it down in a manner most imperative and unmistakeable.

From these general observations, our readers will have been able to get some idea of what a Fracture really is, and of the process by which Nature effects a repair of the mischief resulting from it; the great practical rules to be observed in the treatment, are to bring the ends of the broken bone in close proximity, and to guard them from all disturbing influences. Various mechanical contrivances are used for this purpose, of which we shall speak as we proceed in our description of the different kinds of Fracture to which the human frame is liable. To begin with one of the smallest:—

Fracture of the Finger. After employing extension, and thus bringing the ends of the bone together, place a small smooth piece of deal, or of gutta percha, on the under, and another on the upper side, and proceed to bandage somewhat tightly, so as to keep the finger extended; put the arm in a sling, and keep it so for about a month: if the injured part swells and becomes painful, the bandage must be loosened, and a cold lotion applied; this is generally by no means a difficult case to treat.

Fracture of the Metacarpal Bones—these bones, which intervene between the wrist and the fingers, should be treated in this manner. Place in the palm of the hand a soft, but firm, spherical body, and, closing the fingers and thumb over it, in a grasping position, keep them so with a bandage; by this means the natural arch is preserved, which it will not be if flat splints are applied; in this case, too, the arm had better be slung, and from a month to five weeks will be the time required to effect a union.

Fracture of the Fore Arm may be either of the *ulna* or of the *radius*, or of both; the former is the outer and thicker bone of the two (see accompanying diagram A, No. 1),



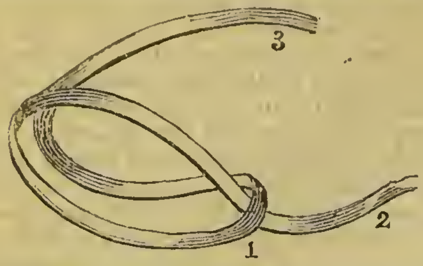
A

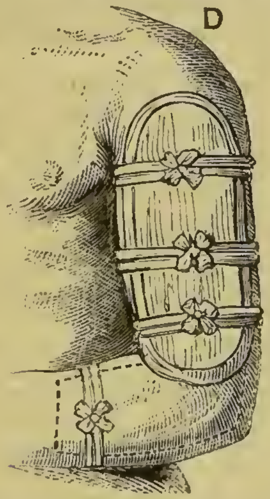
and the fracture of this does not much disturb the general outline of the arm; it may be broken at any part of its length, or at the elbow process, called *Olecranon* (3), or at (4). In the first case the plan will be to bend the elbow, and bring the hand into such a position that the thumb points upwards; use extension until no unevenness can be discovered in the course of the bone, and then apply two splints, the inner one reaching from the bend of the elbow to the tips of the fingers, and the outer from a little beyond the elbow to the middle of the back of the hand, which should be raised well towards the chest, so as to make a sharp angle, and draw the ulna from the radius. When the Fracture is in this latter bone (2), the same method must be adopted, only that the hand must be depressed instead of raised, in order to keep the two bones apart. When these are both fractured, the setting is, of course, more difficult, and much time has often to be spent in extension and manipulation, before the four broken ends can be brought properly together; the splints should he put on as above directed, bandaging the hand firmly to the longer one, and placing it so that it is neither raised nor depressed, but in a right line with the axis of the arm. When there is Fracture of the olecranon there is little or no power of extension in the elbow, behind which a bony lump may be felt: a true osseous union in this case is scarcely to be looked for; but the injury will probably be repaired by a band of ligament. There is commonly inflammation and swelling, which must be reduced before pressure can be applied; the arm should be kept straight, and wet with cold lotion; and apply a splint as soon as it can be borne; let it be a long one, reaching on the inside from the shoulder to the hand: bandage the arm in a straight position, beginning from the top, and making, as you go, extension downward, so as to get the broken bone into its place; it is long ere the limb is in a serviceable condition after a fracture like this. When the coronoid process is broken the matter is more easily managed; the forearm must be bandaged in a bent position, and kept so; in about a month slight exertion of the limb may be allowed, but there must be great care taken that it is not too violent.

Fracture of the Humerus, or Upper Armbone, very commonly takes place in the shaft, on any part of which, within an inch and a-half of either extremity, it is easily detected by the mobility of the limb at the seat of the injury, and the patient's incapability of raising the elbow; the broken ends of the bone, too, may readily be felt, and the crepitation heard, when they are rubbed together. In this case, two wooden splints will be required, one to go before, and the other behind; or, if the arm is very muscular, four may be necessary to embrace it properly; they should be padded with tow, wadding, or lint, as here represented, and

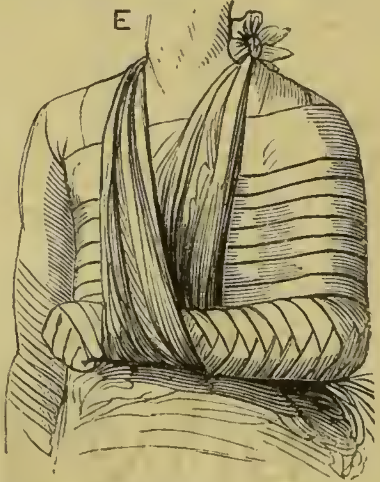
B

furnished with tapes, to buckle, or tie, as may be most convenient; the padding should be placed upon a soft piece of calico or linen, a little longer than the splint at each end, and three times as broad; turn in the ends and sides, so that the pad is a little larger than the splint every way, and about half an inch thick, and make all fast by tacking; place the turned-in ends of the calico next the wood, so that there is a smooth surface presented to the skin. The tapes, three in number, are put on to the splints double, so that there is a loop at one end 1), through which, after it has encircled the limb, the other end is passed (2), then drawn tight, and tied to the remaining end (3) with a bow-knot, as shown in diagram: a bandage, very easily loosened, may be made in this way of a strip of calico or broad tape. The setting of the bone is not difficult in this case; the ends are easily brought together, and being so, the splints may be placed, and made firm by means of the looped tapes; these should not, at first, be drawn tighter than is required to keep the splints right, and prevent movement of the arm. After the first few days, when the swelling has subsided, a more permanent investment of the limb may be made. First give it a pretty firm roll of bandage, then place two splints, one on each side, of stout pasteboard, gutta percha, or leather, cut so that they will come down and cover part of the forearm, as represented by the dotted lines in diagram D. These splints should have been previously shaped, or moulded, to the sound arm, and should be well fixed by more bandage, which, as it is rolled, should be brushed over with starch to prevent its slipping. Sometimes, where there is not much muscle, the starch bandage is alone used; but, in this case, the whole of it must be well saturated with strong starch, paste, gum, or white of egg, with strips of brown paper stuck down across the folds here and there. Care must be taken not to move the arm until all this is dry and firmly set. The hand and wrist must be supported with a sling, but the elbow had better hang free, as its weight will tend to keep the bone straight and the muscles extended.





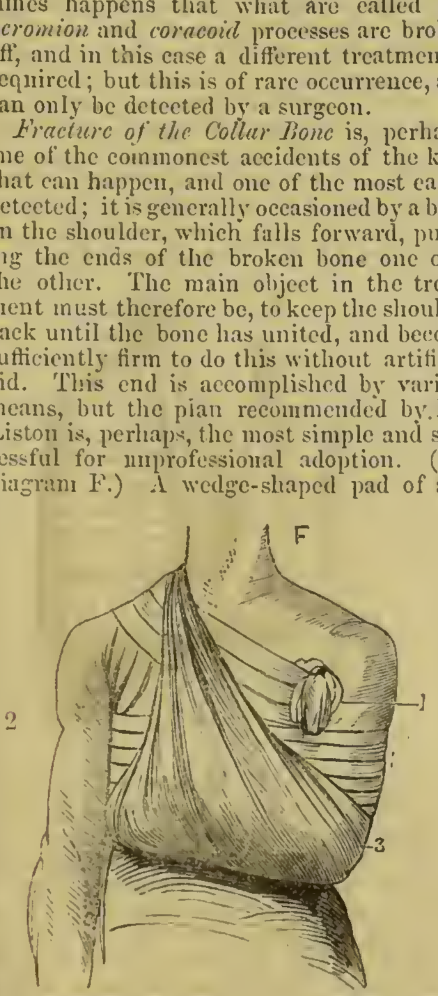
Fracture of the Neck of the Humerus is that which takes place when the upper extremity, or head, is broken off. The symptoms here are very much like those which attend dislocation of the shoulder, and the treatment must be much the same. Draw down the shaft of the bone, and push up the head by means of a pad in the arm-pit; then bringing the arm close to the body, with the lower part at right angles with the upper, fix it to the chest by a splint on its outside, and a long bandage encircling it and the whole body. See diagram E.



Fracture of the Condyles. This is when the lower part of the humerus is the seat of injury, the condyles being the rounded eminences which fit into the socket-like hollows at the head of the ulna to form the elbow joint. In this case, there is unnatural mobility about the elbow, and a hollow behind and above it, by which we know that Fracture has occurred, although we may feel that the bones of the forearm are quite sound; however, none but a skilful anatomist can make out exactly its extent and direction. In any case, the best treatment is to bend the elbow to a considerable angle, and keep it so by means of bent splints of gutta percha, or millboard, moulded to the shape, the first being softened by heat, and the last by moisture. Bandage, and keep all quiet until the adhesion of the bone takes place, then put the arm in a sling, and let it remain thus supported for a month or six weeks.

Fracture of the Shoulder-blade may be caused by a severe blow or fall; it most commonly happens near the neck, and is very likely to be confounded with dislocation of the shoulder, or fracture of the neck of the humerus, like which it should be treated, only that the arm, instead of being drawn down, must be supported. It sometimes happens that what are called the *acromion* and *coracoid* processes are broken off, and in this case a different treatment is required; but this is of rare occurrence, and can only be detected by a surgeon.

Fracture of the Collar Bone is, perhaps, one of the commonest accidents of the kind that can happen, and one of the most easily detected; it is generally occasioned by a blow on the shoulder, which falls forward, pushing the ends of the broken bone one over the other. The main object in the treatment must therefore be, to keep the shoulder back until the bone has united, and become sufficiently firm to do this without artificial aid. This end is accomplished by various means, but the plan recommended by Mr. Liston is, perhaps, the most simple and successful for unprofessional adoption. (See diagram F.) A wedge-shaped pad of any soft material—a pair of old stockings, for instance—is made, and put in the middle of a small shawl, or a large handkerchief; it is then placed well under the arm, but on the injured side (1); the ends of the envelope are brought, back and front, over the opposite shoulder, then crossed, and tied beneath the sound arm (2); another broad bandage of some kind is then passed several times round the body and injured arm (3), so as to bind the latter closely to the former in such a manner that the pad beneath the armpit acts as a fulcrum, and allows the outer end of the broken collar-bone to be pulled backward and outward during the process of binding, which, when completed, sets it fast in the right position; we have then only to envelope the whole of the fore-arm in a sling, and the apparatus is complete; it should be worn a month at least. If the arm exhibits a tendency to swell, it must be bandaged from the fingers upwards.



Sometimes the collar-bone is broken externally, near the point of attachment to the coracoid process: in this case there is scarcely any displacement of the fractured ends, and little need be done beyond keeping the patient quiet, and slinging the arm. In any fracture withinside of this point, the arm falls down, and is drawn inwards, and the above should be the plan of treatment.

Fractures of the Ribs are of not unfrequent occurrence; they commonly result from a fall or blow, and may be complete or only partial, involving one or more of the bones. The *symptoms* are, a sharp pain felt at the injured spot, especially in breathing and coughing; irregularity to the touch; and distinct crepitation. The chief risk involved is injury to the lungs, from the sharp ends of the bone, and consequent inflammation; hence it is usual to bleed patients after this accident if the system will bear depletion; leeches are sometimes applied to the seat of pain, and hot bran bags. A band of stout calico or flannel, from 8 to 10 inches wide, should be passed round the chest several times, beginning close under the armpits and going down to the end of the ribs; it should be drawn so tightly as to keep the ribs from rising and falling in the act of respiration. The patient should be kept perfectly quiet, and on low diet, for a fortnight at least, assuming the position which is found most easy, which will probably be a half-sitting one, supported by pillows.

Fracture of the Lower Jaw sometimes occurs from a blow on the face, and in extracting a tooth. The nature of the mischief in this case is sufficiently evident; the crepitus is distinct, and the Fracture can be felt. Professor Fergusson's treatment is the simplest and surest. Cut two narrow wedges of cork, an inch and a-half long, a quarter thick at the base, and sloping away to an edge; place them between the teeth, one on each side; warm a piece of gutta-percha, or soften a piece of thick pasteboard in water, and mould it to the injured jaw, and keep in its place by means of either of the head bandages figured at page 77. This must be tight enough to prevent any motion in the jaw; the cork wedges will keep an open space between the teeth for the passage of food, which must be in a liquid form; the mouth should be rinsed frequently with a lotion of Tincture of Myrrh and Water, in the proportion of 2 drachms of the former, to ½ a pint of the latter.

Mr. Wilkinson, surgeon, of Sydenham, reports a case of this kind which is worth recording, as an example of what wonders may be effected by the curative processes of Nature, aided by skilful scientific treatment:—

"J. M——, aged 56, whilst engaged in breaking in a newly-shod colt, on the 22d of January, received a violent kick upon the face, which knocked away several pieces of the alveolar process, with the upper and lower incisors and canine teeth, cutting through the lower lip, leaving an angular piece hanging, exposing the jaw, and fracturing the bone through one inch from the median line of the chin. The blow was given somewhat sideways, the whole of the face being much cut and contused, the nose only being saved by being included in the hollow of the horse's foot.

"The accident was witnessed by some of the neighbours, who removed him from the snow, which was fortunately thick upon the ground at the time, and I saw him about fifteen minutes after, when he had recovered from a partial state of insensibility. The loose pieces of bone were removed, the fractured ends of the bone reduced and placed in apposition, and a gutta percha chin-piece, padded with soft lint, was made and adapted (by means of modelling with hot water) so as accurately to fit the chin, and fixed with bandages.

"Great inconvenience was now experienced by the oozing of saliva and blood from the wound of the lip, which was remedied successfully by the application of collodion mixed with a portion of oil, to prevent its cracking.

"The patient was restricted to a diet of beef-tea, soup, gruel, milk, &c., and, with the exception of an attack of gout, to which he is liable, has progressed well."

The accident, we see, happened in January; in May the surgeon writes:—

"The bone is now consolidated; he is able to eat well, and has regained his usual health, with little or no deformity beyond the loss of his teeth."

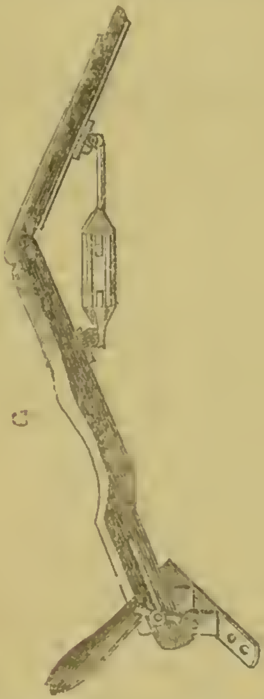
No case of Fracture should dishearten us after this.

Fracture of the Nose may easily take place, on account of the prominence of the feature, and the thinness of the bones. When any of these are broken, there is nothing to be done, save to elevate them from the inside, by introducing some smooth instrument, such as a probe, or netting-pin. If the broken pieces of bone are kept in their places by means of sticking-plaister, they will quickly unite, and little or no disfigurement may be the result; the necessary replacement should be effected before inflammation sets in, and cold lotions applied to the part while there is any redness or swelling.

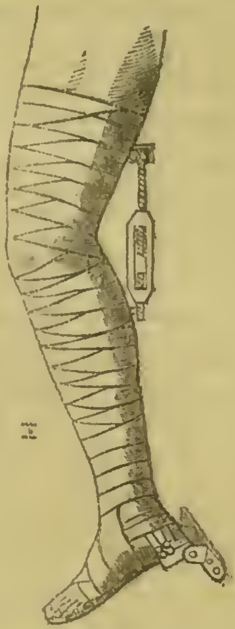
Fractures of the Skull are generally attended with injury to the brain, and are always very serious affairs, on account of the concussion which takes place, and the amount of cerebral mischief arising out of this. Domestic treatment can do little here; pending the arrival of the surgeon, the hair should be cut closely off about the seat of the injury, and cold lotions applied. It is not always easy to ascertain whether the skull is really fractured, as a simple crack will be likely to escape notice; but very commonly there is a depression, and sometimes a portion of the bone is driven out of its place, exposing the *Brain* (which see), and *Skull*.

We have now to speak of those Fractures to which the lower parts of the body are liable, one of the most common of which is

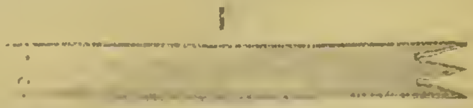
Fracture of the Leg. In this limb, as well as in the fore-arm, we have two bones, either or both of which may be broken: the outer or main bone is called the *tibia*, and the inner or "splent" bone is the *fibula*; the knee-joint is formed by the first alone, but the second takes part in the formation of the ankle-joint. A reference to the article *Leg* will show the exact positions of these bones, rather above than below the middle of which Fracture most usually occurs. When the fibula alone is broken, the setting is not a difficult matter, for the tibia acts as a splint to keep it in its place; but it is so well protected by muscles and its position, that this seldom occurs. Should the tibia be fractured, the fibula supports the limb, and prevents any muscular contraction or displacement. The Fracture in this case can be easily discovered; there is distinct crepitus, and an unnatural prominence or depression felt, in passing the hand carefully along the shin. The Fracture of the fibula is more difficult of detection, especially if it be in the upper part; but this is very rare. When it does occur, it is generally near the lower end, where it may readily be felt, even through the swelling, which is almost sure to supervene. When both bones are broken—and this is the most common occurrence—there will be a change in the direction of the axis of the leg, the upper part of which does not answer to a movement made in the foot, which, when left to itself, falls below its proper position, usually with the toes turned out. In this case, the most convenient mechanical appliance that can be used is Liston's leg splint, which we have here figured; it is a light framework



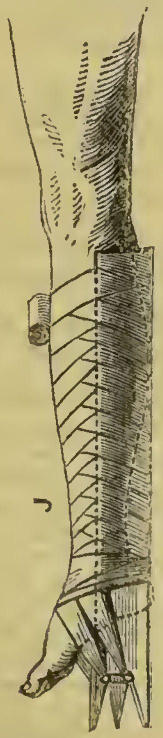
of iron, in two distinct portions, joined together at any angle by a rod, which can be extended and contracted, according to the requirements of the case; the lower portion is furnished with a foot-piece, which, by means of a thumb-screw in a slide, shifts up or down, and to this the foot is securely bandaged, as shown at diagram II. Great care must be taken, before thus confining he limb, to get the broken bones in their places by a little extension and movement of the foot, which also must be placed in a natural position on the foot-board, and prevented slipping off by a heel-piece of leather nailed on; this must be padded, as must also the parts on which the leg and high rest, or the long-continued pressure may cause sores. When there is much welling in the limb, it should be allowed o lie on the apparatus without any bandaging, except to the foot, for some days, until, by the use of cold lotions, the inflammation is reduced.



By this apparatus it will be seen that the injured limb can be easily raised or deprsssed, and placed in any desired angle, and this principle should be applied to any instrument contrived for setting a fractured leg. Sometimes the limb is kept constantly flexed on double or triple inclined planes of splints, resting on a frame, capable of extension or contraction. Sometimes the limb is slung from above; but the old-fashioned straight splint, against which many objections may be urged, is still used in most of the London hospitals, and this would probably be the most readily available in domestic treatment. It is shaped thus—

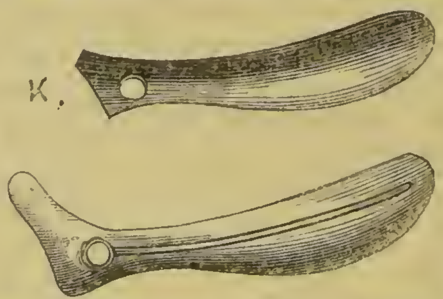


and should be sufficiently long to extend from a little above the knee to four inches beyond the sole of the foot. It may be quickly made by any carpenter, out of half-inch deal, planed smooth; the breadth should be about three inches; this must be padded throughout its whole length, except the notched end, which is to project beyond the foot, with tow, lint, or other soft material, taking care to have the pad thicker at the lower part, to suit the diminution in the size of the leg. This splint must be carefully placed against that side of the limb from which the foot exhibits a tendency to turn. We will suppose that a stout calico bandage, about 2½ inches wide, and 12 inches long, has been provided; with this, beginning at the foot, and bringing it down from the instep between the notches at the bottom of the splint, envelope the limb evenly, fold over fold (as directed under the head of *Bandages*) up nearly to the knee, just below which a broad piece of tape should be passed, with the ends through the holes in the top of the splint, which ends are to be firmly tied at the moment when extension of the limb is made by an assistant; the bandage is then to be carried on over the head of the splint, and made secure. In diagram J we see the limb, before this process is completed. When both bones are broken, it is generally necessary to apply the angular splint adapted to the ankle, of which diagram K exhibits the outer and inner sides.

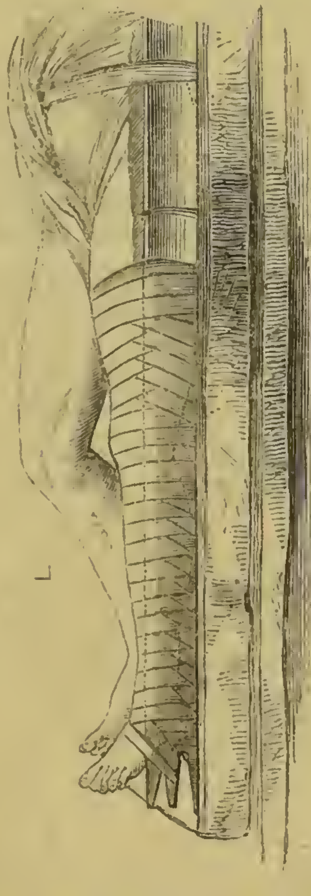


Fracture of the Knee-Pan sometimes happens from the mere muscular exertion of kicking or throwing out the leg violently; it may be at once detected by the depression in the bony plate, and separation of the broken fragments; these cannot be kept in close apposition, and the injury is made good by a ligamentous band, which connects them; to facilitate this process, the leg should be kept in a straight position, above the level of the hip, so that the muscles of the thigh, which are attached to the upper edge of the knee-pan, may be relaxed. A long splint, bound beneath the leg from the thigh to the foot, will effect this object; or Liston's apparatus, elevated. Over the broken patella, a piece of calico is bound, and the knee is bandaged tightly above and below this, so as to bring the broken pieces as closely together as possible, and to keep them so. The bandage will have to remain on probably for two months, as a Fracture of this kind unites very slowly, the knee is generally weak after, and it is best to support it with an elastic knee-cap.

K.



Fracture of the Thigh is a very serious accident; the bone may be broken just above the knee, in the shaft, or near the neck. In the first of these cases the nature of the injury is sufficiently obvious, as the broken bone can be felt beneath the skin; this also is the case with the second, in which, as in the third, there is shortening of the limb, and generally turning out of the foot. This accident may be readily distinguished from dislocation of the hip, by the mobility of the hip joint. There is always much difficulty in keeping the ends of the bone in apposition here, in consequence of the power exerted by the muscles of the thigh, which are constantly pulling lengthways, and causing the ends to overlap, or, as we say, "ride" upon each other; this is especially the case if the fracture is oblique. It is best to use the long straight splint first, in either of these cases, and to put it on with a light bandaging, gradually tightening it, to accustom the limb to the pressure; the splint must be made in the same way as that figured in diagram I, but much longer, reaching from the hip to beyond the toes. When inflammation has subsided, and the pressure can be borne, the case had better be treated in this way:—Let the patient lie on a hard mattress, with the leg extended and uncovered; then commence operations by bandaging the leg evenly from the toes to the knee; then place the splint, previously well padded, in its place, and make it fast with rollers to the foot, ankle, and leg, taking care that the former is in the position which it is to occupy—that is, pointing straight upwards; next take a silk handkerchief, in the middle of which some wool has been rolled up, to make it of considerable thickness, and pass it between the legs, bringing one end up behind, and one before; these ends pass through the holes at the top of the long splint, and tie them as tightly as possible, without displacing the Fracture; then, after confining the splint to the waist, with a bandage, insert a short stick between the loop of the handkerchief, and give two or three turns; this will have the effect of shortening the handkerchief, and pulling down the splint, which will carry with it the part of the limb attached to it below, producing the necessary extension; keep on at this, until you find that the injured leg is as long as the sound one; and when this is the case, lay a short splint along the inside of the thigh, and bandage tightly and smoothly, from the knee up to the hip. When it is completed, the patient will appear as in diagram L; the extension must be kept up for about 6 weeks, at the end of which time the Fracture may be sufficiently united to bear the strain of the muscles upon it.



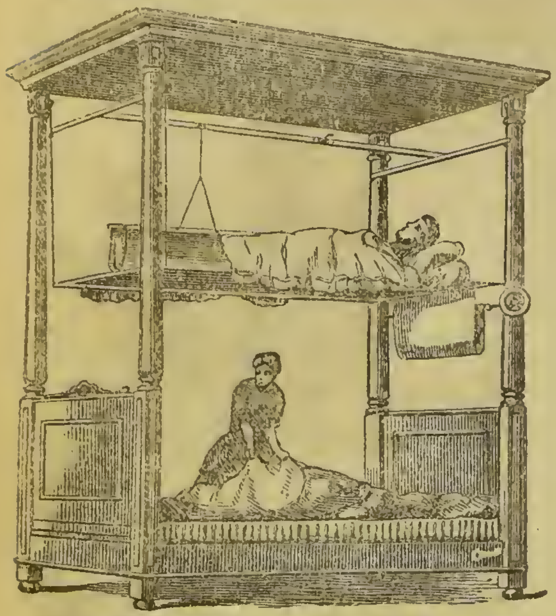
L

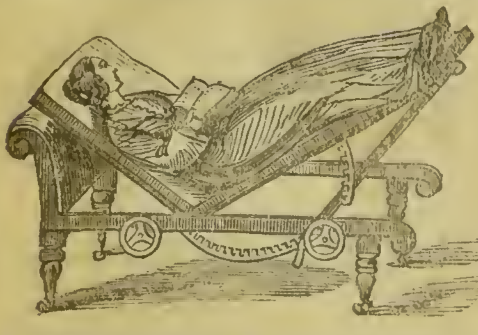
Fracture of the Pelvis sometimes occurs in falls from great heights, or in being run over, or having some crushing weight thrown upon the body: when it occurs there is generally serious injury to the viscera of the abdomen and pelvis, indicated by the passage of blood from the bladder and bowels. The nature of the mischief in this case is not easily detected, and little can be done beyond enjoining perfect rest and a lowering diet, unless there are symptoms of collapse, in which case stimulants must be given.

Fracture of the Spine does not often occur, but when it does there is little hope for the patient; in this case there is pressure upon the spinal chord, causing paralysis of the lower extremities, or if it should happen high up, of the arms also. Rest and stimulants may be here recommended, chiefly, perhaps, because one likes to make an effort. (See *Paralysis*, *Spine*.)

There are many other mechanical contrivances for the treatment of Fractures to which we might allude, but they are interesting chiefly to the profession, and more adapted for hospital than private practice. We may just mention two or three of those that appear to us most deserving of note:—

Salter's Fracture and Dislocation Apparatus consists of a metal cradle suspended from a smooth bar, along which glide two pullies; this bar forms the top of a light framework supporting the apparatus. The leg is placed in this cradle, which swings to and fro, or moves backwards or forwards, with the slightest movement of the body, so as to admit of change of position without disturbing the Fracture; it is made in several parts, to facilitate the operation of dressing, &c., in compound Fractures. There is also a useful metal splint by the same inventor, adapted for Fractures of the leg, and one somewhat like Liston's, but capable of extension and contraction, as well as elevation, and of adaptation to all Fractures of the extremity; these may be had of Mr. Coxeter, Surgical Instrument maker, of London. There is also a "Fracture and Invalid Bed," which may be had on hire of Messrs. Wilson and Co., 144, High Holborn, London, which has many advantages, one of them being that, by a simple process, the whole body of the patient, may be elevated out of the way without disturbance, when it is desirable to make the bed. Various kinds of couches are also made, in which the patient can be placed in any desired position. The adjusting couch, patented by Mr. Kirby, is one of the best of these. We give a cut of this useful article in one of its forms of adjustment, as exhibiting the angle of elevation at which it is desirable to keep the leg in Fracture of the knee-cap.





Quite recently, Winchester's new method of treating Fractures has been introduced: he thus describes his apparatus:—"My invention consists of joints of wood, metal, or other suitable material, and of convenient length, which have the power of being fixed at any desired angle. By this arrangement, we are enabled to take and retain the exact shape and form of any portion of the human body, thereby forming a perfect model of the sound or healthy part, and consequently a complete support for the corresponding injured or diseased part. Its advantages are these:—It gives confidence and certainty to the surgeon in the treatment; and, being applicable to all cases, and exceedingly portable, effects a great saving of time. A full-sized splint can be folded into a space of 15 inches, by 3 wide and 3 deep, and can be carried round the waist as a belt, or in the pocket."

There appears to have been lately in our hospitals a tendency to simplify splints and other Fracture apparatus; the general idea being simply kept in view to secure quietude and coaptation of parts, without pressure or obstruction of the venous circulation. Bags of sand, and starch bandages, are much used in lieu of more complicated apparatus; and these answer well where the case can be carefully watched by surgeons and nurses, and any displacement at once adjusted. Many, very many, cases of Fracture, are obliged to be left wholly, or almost so, to unprofessional management; how important is it, therefore, that this should be careful and intelligent, and that the general principles of treatment should be well understood. A little inattention, or a slight mistake, may not only greatly increase the present sufferings of the patient, but blast his future prospects, even if it does not lead to a fatal termination of the case.

Fragilitas Ossium. A morbid brittleness of the bones, also called *Mollities ossium* (which see).

Fragment. This term is applied in surgery to a splinter, or detached portion of a fractured bone.

Frambœsia (French *framboise*, a raspberry). The name of a disease indigenous to Africa; it is identical with the *Great Gore*, *Pox*, or *Morbus Gallicus* of the fifteenth century, and is in Scotland termed *Sibbins*, a corruption of the Gaelic *Sivvens*, or wild rash. It consists of imperfectly suppurating tumours, which gradually increase, until they become as large as, and something like, a raspberry, the African name for which fruit is *Yaws*, by which term the disease is most commonly known, it will, therefore, be more fully described under that head.

Frangipani. An extract of milk, made by evaporating skimmed milk to dryness; it is used for preparing artificial *Milk* (which see.)

Frankincense. The gum resin of the *Abietis Resina*, or Spruce Fir, formerly called

Juniperus Lycia ; it was one of the gums used as incense in the worship of the true God, as well as of the false deities of idolatrous nations, and was thought to be obtainable only in Arabia, and in that part inhabited by the Sabæans, by whom the "incense trees" were jealously guarded, no persons being ever permitted to see them except those who had the care of them. We obtain the gum now from several species of the genus *Abies*, and call it variously *Burgundy Pitch*, *Frankincense*, *Thus or Thuris*, (all of which see) ; it is seldom or ever used internally, but enters into the composition of several plaisters and ointments used as rubefacients and strengthening applications, such as the *Emplastum Thuris* of the Dublin, and the *E. Picis* of the London and Edinburgh Pharmacopœias.

Fraxinus. Ash. The bark of the common Ash (*Fraxinus Excelsior*) has been used as a substitute for cinchona, in larger doses; the leaves also have been recommended as a substitute for senna, and employed in the treatment of rheumatic affections. They should be gathered in June, carefully dried, powdered, and put into a well-corked, or stoppered bottle; when required for use, infuse 1 drachm in a pint of boiling water until cold, and strain; take a teacupful twice a day; as a purgative, ½ an ounce of the Powder is required.

The *Fraxinus Ornus*, or flowering Ash, of which we give a cut, is the tree whose concrete juice, *Manna* (which see), is much used as a mild laxative for children. Modern botanists call it *Ornus Europæa*, it belongs to the natural order *Oleineæ*, as does also the *Ornus Rotundifolia*, which also produces the manna, and is, like its congener, a native of the south of Europe,

Freckles. These are the little yellow or brownish spots—in scientific language termed *Lentigines*, which appear on fair skins, especially when subjected to the influence of the sun; those which have red hair, are more liable to them than any others; they disfigure the face somewhat, but cause no other annoyance. We know of no applications which will altogether remove them, although many venders of Cosmetics profess the art of doing so. To mitigate their depth of colour, and to render them less noticeable, an acidulated wash of Water and Lemon Juice may be used; Mr. Eramus Wilson, our greatest authority on skin diseases, recommends a linament composed of Lime Water, and Oil, with the addition of a little Ammonia. The most effectual remedy, however, that we know of is made as follows:—Solution of Chlorinated Soda, ½ an ounce; pure Glycerine, 1 ounce; Rose or Elder-flower Water, 10½ ounces; mix, and sponge the skin freely night and morning; if it makes the skin smart, reduce the strength with a little plain water. See *Cosmetics*.

Freeman's Bathing Spirits. A popular remedy for rheumatism, sprains, &c.; it consists of common Soap linament, or Opodeldoc, coloured with some dark Tincture.

Freezing Point. The degree of temperature at which water changes to ice; this is 30° Fahr. See *Cold*, *Frigorific*, *Temperature*, *Thermometer*.

Friar's Balsam. This styptic application for wounds and cuts, and popular remedy for some internal complaints, is the Compound Tincture of Benzoin of the London Pharmacopœia; it may be prepared thus:—Gum Benzoin, 3½ ounces; Strained Storax, 2½ ounces; Balsam of Tolu, 10 drachms; Aloes, 5 drachms; Rectified Spirit, 2 pints; let it stand for fourteen days, shaking frequently, before using. This preparation is stimulant, expectorant, and antispasmodic, and is useful in old asthmatic cases, chronic catarrh, and phthisis with a languid circulation; the dose is about ½ a drachm in Mucilage, or mixed with Yolk of Egg, or dropped upon Lump Sugar. Applied to wounds, it stimulates gently, and protects from the action of the air. It is probable that this, or something like it, was used by the monks of old to dress the wounds of wayfarers, or those who dwelt about the convents, hence its popular name.

Friction. (Latin, *frico*, to rub). The act of rubbing with the hand, or some interposing substance, is a very beneficial agency in the treatment of many diseases; it excites the nervous susceptibility of the skin, and quickens the circulation through the small capillary vessels, hence its utility in congestions near the surface, such as chilblains, and thickenings of the tissues. For some parts flesh brushes and rough towels may be used, the kind of friction spoken of by Thomas Hood, in his reminiscences of school days—

> " Huckaback softened with sand ;"

but this would not do for delicate skins, and parts that are tender, such as the breasts of a suckling mother, which, when painfully distended with milk are often wonderfully relieved by gentle rubbing, the movements of the hand being facilitated by some oily or saponacious fluid; simple Olive or Almond oil, is perhaps the best that can be used, the mechanical effect being the chief thing to be considered in the application of such *Linaments* (which see).

As a substitute for exercise, Friction may be strongly recommended; it should be applied often and vigorously, not only does it stimulate the parts brought immediately under its influence, and cause a healthful glow of the skin, but it calls into action the various sets of muscles, and so is in itself a kind of exercise for the whole system; hence it is better for the bather—who should always have Friction applied—to rub himself, and not be rubbed, especially in cold or temperate climates.

The value of Friction, in case of asphyxia or suspended animation, from drowning, &c., is so well known that we need scarcely insist on it here; in all cases where there is coldness of the extremities from congestion, or impeded circulation, it should be applied with promptitude and vigour. We have seen wonders performed by this simple agent alone; but for all that do not pin our faith to *kineopathy* (which see), nor believe altogether in " the Movement cure." Good to a certain extent it undoubtedly is, but, like all other remedial agencies, it should be used with discretion; those who claim for it an universal efficacy do but injure its real utility.

Frigidarium. (Latin, *frigidus*, cold). A classical name for the cold bath, of a temperature not exceeding 65° Fahr.; above that, and up to 96°, it was called *Tepidarium;* and still rising to 100° and more, *Calidarium*. See *Bath*.

Frigorific. (Latin, *frigus*.) The property of producing extreme coldness, so as to convert liquids into ice; a combination of certain chemicals will have this effect, which is a consequence of the rapid absorption of heat by bodies passing from the solid to the fluid state. In cases which require the application of cold to an inflamed surface, Frigorific mixtures are of great utility; the following are among those of which the ingredients are most accessible: 1st., Snow or Pounded Ice 2 parts, Common Salt 1 part; 2nd., Snow 3 parts, Dilute Sulphuric Acid 2 parts; 3rd., Muriate of Lime 5 parts, Snow 4 parts; 4th., Muriate of Ammonia, and Nitrate of Potash, of each 5 parts, Water 16 parts; 5th., the above with 8 parts of Sulphate of Soda; 6th., Sulphate of Soda 5 parts, Dilute

Sulphuric Acid 4 parts. The salts in all the above recipes should be finely pounded and kept dry, until the liquid is added; if this is plain water, it should be drawn fresh from the well, or taken from some cool place. Rags wet with the lotion should be kept applied to the inflamed part, and renewed as often as they cease to impart a sensation of coldness. See *Lotions. Refrigerants.*

FRÆNUM (Latin, for a bridle). Hence we have *F. præputii*, a triangular fold connecting the prepuce with the under part of the *Glans Penis* (which see); *F. linguæ*, a fold formed at the under surface of the tongue by the mucous membrane, lining the mouth. When the frænum is very short, or continued too far forward, children are what is called *Tongue-tied* (which see); *F. epiglottidis*, a ligament which unites the epiglottis to the os hyoides and the *Tongue* (which see); there is also a fold of the mucous membrane of the mouth formed opposite the symphysis of the *Chin*, (which see).

FRONS. (Latin *frontis*, the forehead.) Hence we have the terms *Frontal*, applied to the arteries, nerves, sinuses, &c., of the forehead; also to a spine or sharp ridge, and to a grove or furrow in the inner surface of the frontal bone, which by surgeons is termed the *Os frontis*. See *Head. Skull.*

FRONTAL SINUS. This is the cavity in the bone behind the eye-brow, extending to the nose; any inflammation in the mucous membrane of which is likely to extend upward into this hollow. Hence in colds, especially those which assume a catarrhal character, we often have severe pain over the eyes. See *Sinus.*

FRUIT. This is the edible seed of many kinds of plants, being in fact the pistil of the flower arrived at maturity; it may be hard as in the Nut, or soft as in the Cherry or Grape; its flavour depends upon the existence of certain secretions from the sap of the plant, but more especially of acid and sugar—the process of ripening being the conversion of much of the other ingredients of the juice into the saccharine principle. Although allusion is made in this volume to all the fruits generally eaten under their special heads, yet it will be as well to make here a few general remarks, and first as to the question of the wholesomeness or otherwise of fruits with which we are more immediately interested; there can be no doubt that, both in their fresh and dried state they are extremely useful, affording to the blood the saline constituents which it generally needs, cooling the system, and in many cases acting as a gentle aperient; the best, because the most easily digested kinds, are those which are soft and pulpy, having the seeds enclosed in a pouch, skin, or rind, such as Grapes, Currants, Gooseberries, Strawberries, Raspberries, Blackberries, Mulberries, among native, and Oranges and Lemons among imported fruits; Apples also, although not soft and pulpy, are very wholesome; but as much cannot be said for Pears and Medlars, as, in most kinds of these, decomposition commences directly the ripening process is completed, so that they are seldom eaten in a perfectly sound state. Stone Fruits, such as Cherries, Plums, Apricots, &c. are not so wholesome as those with seeds, although taken in moderation they act beneficially, especially in a cooked state. Melons and Pine Apples we must pronounce decidedly unwholesome. With regard to the best timo for eating Fruit, let us observe that it is digestible in proportion to its perfection, and, therefore, care should be taken to have it perfectly ripe, and yet not in a state of decay. Most juicy Fruits are best taken in hot weather, and the drier kinds in the cold seasons. The best time of day for eating Fruits is the morning, none but the more watery kinds should be eaten after midday, and none at all late in the evening. The worst possible time to eat them is just before going to bed.

FRUMENTY (Latin, *Frumentum*). We give a receipt for the preparation of this article of diet, although we cannot recommend it as wholesome, especially if made, as it generally is, of new grain:—Boil a quarter of a pint of Wheat in water for three or four hours, then drain off the liquid, and add a quart of Milk, with which has been previously mixed 2 tablespoonsful of flour, 2 Eggs, a ¼ of a pound of Currants, a little Lemon Peel, and Spice of some kind, Cinnamon is perhaps the best; boil for about twenty minutes and sweeten; no doubt this is very nourishing, but it is heavy and difficult of digestion; if taken at all it should be as a very occasional luxury. The name of the above is commonly corrupted to *Frumity* or *Fermity*.

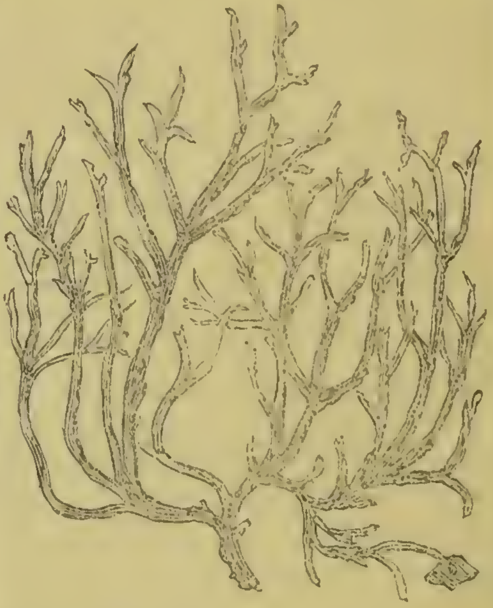
FRYING. Is a mode of cooking which, those who have a regard for the preservation of health will avoid as much as possible; it is altogether unsuited for persons of weak digestion.

FUCUS. A genus of marine plants, several species of which are used medicinally; of one of them, the *Fucus* or *Chondrus Crispus*, we have given an account under the head of Carrageen Moss; another is the *F. Vesiculosus*, or Bladder Sea-wrack, which was formerly given in goitre and other scrofulous affections; it was prepared in the same way as Burnt Sponge: dose from 5 to 10 grains, sometimes increased to a drachm.

Since the preparation of Iodine from this and other sea weeds, the above inconvenient mode of administration has fallen into disuse; but the fresh Fucus, bruised, is still occasionally applied to scrofulous tumours, and to those living on the sea coast who can readily obtain it, its use may be recommended. We give a cut of this species.

The Bladder-Wrack was first described by Clusius, under the name of *Quercus Marina*—Sea Oak—the black powder which it formed on being burnt—in which form it was generally administered—was generally known as the *Vegetable Æthiops.*

There is also another Fucus, the *F. Gigartona*, or *Helminthocortus*, commonly termed Corsican Moss, which has been given to expel worms, especially the limbrici, it has likewise been thought useful in cancer; dose of the Powder from 20 to 60 grains; of the Decoction from 1 to 2 ounces; of the Infusion a winglassful; of the Gelatine a drachm.



Fuliginous (Latin *fuligo*, soot or smoke). Applied to vapours which possess the properties of smoke. Wood Soot, the *Fuligo ligni* of old medical works, was once a favourite remedy for hysterical affections, chronic rheumatism, and catarrh of the bladder; outwardly, it was applied for the cure of itch and various skin diseases, as well as for cancer. When used for chronic eruptions, the crusts are first removed by means of poultices. It is also sometimes applied to burns; but is too iritating for this purpose. Wood Soot is still a favourite remedy with some continental practitioners; the more shining particles are selected for use. *Fuligo Kali* is a preparation of Wood Soot with Sulphur and Potash; it is sometimes given as an alterative in herpatic eruptions, and in scrofulous and rheumatic affections; the dose is from 1½ to 2 grains three times a day. See *Anthrakokali.*

FULMINATING (Latin *fulmino*, to thunder). A term applied to detonating or explosive mixtures, of which the most common example is the Fulminating Powder, a compound of 3 parts of Nitre, 2 of Carbonate of Potash, and 1 of Sulphur. *Fulminic Acid* is a compound of Cyanogen, which, like the above powder, explodes when struck, rubbed, or heated, the explosion which then ensues being called *Fulmination.* We are not aware that any of these preparations are employed medicinally, although they sometimes make surgical cases, being the explosive agents employed in "infernal machines" and the like destructive engines.

FUMIGATION (Latin *fumigo*, to perfume). This is a mode of diffusing vapours over a limited space, for the purpose of destroying or hiding disagreeable and unwholesome smells; or of applying them to a diseased part, such as the inside of the throat, which it would be difficult to reach in any other way. The most useful and important kind of Fumigation consists in the employment of such gases or vapours, which do not merely cover unhealthy odours, by exciting others more powerful, but which actually destroy them, and by their chemical action prevent the decomposition of animal and vegetable substances; these we term *Disinfectants*, and Chlorine Gas is, perhaps, the most efficacious that can be used; it may be produced thus:—Take powdered Oxide of Manganese and Common Salt of each 1 ounce, mix with about 2 teaspoonsful of Water, put it into a shallow earthen vessel, and add about 60 drops of Oil of Vitriol; place the vessel in the apartment to be fumigated. The acid may be repeated three times before the Manganese and Salt lose their power of evolving Chlorine. Chloride of Lime, of Soda, and of Zinc are also good disinfectants, and are much used in hospital wards, sick rooms, water-closets, &c. The first of these is the cheapest and the most attainable; it may be used in solution, 1 part of the salt, which is commonly called "Bleaching Powder," being dissolved in 100 parts of Water; it may be sprinkled about the place, or poured into shallow vessels; its action will be quickened by the addition of a little Vinegar, or Muriatic Acid largely diluted. (See *Disinfectants*, *Lime*, *Manganese*, *Soda*, *Sulphur.*) The vapour of burning Sulphur, of Vinegar, and aromatic substances, such as Cascarilla, have long been employed to hide unpleasant effluvia (see *Pastilles*). The following is a good preparation for this purpose:—Take of Bisulphate and Nitrate of Potash equal quantities, Peroxide of Manganese sufficient to blacken the mixture; rub them together in a mortar; heat a shovel or brick red hot, and scatter some of the powder on it; then burn a small piece of paper which has been dipped into a solution of Nitrate of Potash 2 parts, Sugar 1 part, and Water 6 parts, and afterwards dried. The two vapours will combine, and diffuse a most agreeable odour.

With regard to the application of the vapour or fumes of metallic or other preparations to the throat, or other parts, we can only say here that the mode of doing this is to throw the ingredients upon hot iron in a closed chamber, connected with which is a spout like that of a coffee-pot, through which the vapour is conducted to the point of application: under the head of *Inhalation* more will be said upon this subject.

FUMING LIQUORS are those chemical mixtures which emit fumes of vapour when exposed to the air. Several of the strong acids do this, and the volatile preparations of Ammonia, &c. The Hydrosulphuret of Ammonia was formerly known as *Boyle's* or *Beguine's Fuming Liquor.* The Chloride of Arsenic, which inflames when brought into contact with the air, was termed *Cadet's F. L.*; and the Bichloride of Tin, *Libavious' F. L.*

FUMITORY. A creeping plant, with a purplish blossom, that overspreads the English cornfields and waste places during the summer and autumn months; it is the *Fumaria Officinalis* of botanists, belonging to the natural order *Fumariaceæ*, and, although now little used, was once thought a valuable therapeutic agent, having been employed in jaundice, diseases of the eye, scorbutic complaints, and chronic affections of the skin. Cullen found it serviceable in lepra, as well as in the more tractable cutaneous diseases. Dose, of the Powder, from 10 to 40 grains; Extract, 5 to 20 grains; of the Tincture, 1 to 2 drams; Juice, 2 ounces. (See cut next page.)

FUNCTIONS (Latin, *fungor*, to discharge an office). These are the offices or duties of the various organs of the animal economy. They may be divided into—1st, *Vital*, such as are *immediately* necessary to life, as are

those of the brain, the heart, and the lungs, which have been collectively called the tripod of existence; 2d, *Natural*, those which are less instantly necessary to life, as absorption, assimilation, digestion, expulsion, &c.; 3d, *Animal*, as those which have relation to the external world, as the senses and the voluntary motions. *Reflex Function* is a term applied by Dr. Marshall Hall to that action of the muscles which arises from a stimulus, applied through the medium of the nerves and the spinal marrow; thus, the *larynx* closes on the contact of carbonic acid, the *pharynx* on that of food, and the *sphinctur ani* on that of the fæces. All these three are Reflex Functions, or Involuntary Motions connected with *Irritability* (which see). By *Functional Disorder* we mean that condition of an organ in which its natural duties are suspended without any absolute structural alteration.

FUNGI. A tribe of plants, in which are included the various kinds of mushrooms, toad-stools, and similar productions, as well as the more minute growths, known as brand, dry-rot, mildew, mouldiness, rust, smut, &c. They are mostly indicative of an influence prejudicial to health, if not to life, and a large proportion of them are absolutely poisonous; they flourish chiefly in damp, close situations, and, instead of purifying the air, like other plants, by absorbing its carbonic acid, and giving out oxygen, they vitiate it by a precisely opposite process. Of the various plants of this kind which grow wild in our own country, it is not always easy to distinguish between the poisonous and wholesome ones, and only those who are accustomed to observe them closely are likely to avoid mistakes which may be fatal.

Dr. Badham, in his work on the "Esculent Fungi of England," says, these which are bitter, or styptic, or that burn the mouth on mastication, or parch the throat when they have been swallowed, should be put aside. He adds, that those which yield spiced milk, of whatever colour, should be held, notwithstanding exceptions, in suspicion, as an unsafe dietary to deal with. He remarks, too, on the fallacy prevalent among cooks that *only* the poisonous fungi will tarnish a silver spoon used in the dressing. The following simple rules to distinguish poisonous from wholesome fungi may be of service—1. Notice that the deleterious kinds have generally a rough warty cap, with fragments of membrane adhering to the upper surface; that they are thick and heavy in form, and emerge from a vulva or bag; they grow generally in tufts and clusters, about the roots or on the boles of decaying trees, and other places where vegetable decomposition has taken place; 2. That they have an astringent taste, and a disagreeable smell; 3. They are moist on the surface, and often of a rose or orange colour, turning blue when cut; 4. If salt be sprinkled on the gills, or spongy part, it will become yellow; if the Fungus be wholesome a change to black will be the result of this experiment. The kinds to be eaten are mostly found in open fields and in waste lands; they have commonly a smooth upper surface, a compact form, and white flesh of a brittle texture; the footstalk is clean, smooth, and cylindrical, and is of considerable length. (For further particulars on this head, see *Mushrooms*, *Toadstools.*)

The Fungi of this country might be turned to much better account than they are as an article of diet if the poor could be instructed how to distinguish the wholesome from the poisonous kinds. On the continent they are very much eaten, and deservedly esteemed; both in flavour and texture they more closely resemble meat than any other vegetable production, and they are certainly nutritious. The Russians eat most kinds, stewing them thoroughly, and taking after them a little brandy. Among those chiefly used may be named the *Morells*, which are imported dry from Italy, and generally made into a sauce. *Truffles* are also an imported species, which are made into soups and delicate sauces. *Puff Balls* are slightly narcotic; the dust of them is said to stupify bees. *Boletus Suaveolens* is employed medicinally in phthisis — dose, 1 scruple, in Powder, three or four times a day in an Electuary. *Agaric* of the *Tartary Larch*, sometimes called Male Agaric, has been given as a purge—the dose is from 1 to 2 drachms in Powder, mixed with Ginger; it comes from Turkey to this country. *Champignon*, or *Scotch Bonnets*, is used to flavour sauces. *Jew's Ear*, which grows on the elder, was once esteemed as a remedy for Quinsy, soaked in milk or vinegar. *Oak Leather* is a Fungus found in the clefts of oaks; it is used in Ireland to dress ulcers, and in Virginia to spread plaisters on—so tough and leathery is it. *Touchwood*, or *German Tinder*, when softened by beating, is used as a styptic for fresh wounds and cuts, or as tinder, when soaked in a solution or Saltpeter, and dried.

In poisoning by Fungi, the best remedy, after free vomiting has been induced, and clysters employed, is 1 drachm of Ether, and 10 drops of Tincture of Capsicum, in a wine-glassful of Water.

FUNGIC ACID. Is found in most members of the Fungus tribe; it exists partly in a free state in the *Periza nigra*, and combined with Potash in the *Boletus juglandis*. It is colourless, very sour, uncrystallizable, and deliquescent.

FUNGIN. Is the fleshy substance of edible mushrooms, purified by digestion in a hot weak solution of Alkali; it is highly nutritious, and in many of its properties closely resembles *Lignin* (which see). Then we have also *Fungates*, the salts of the acid spoken of above; and we say that certain growths or formations are *Fungiform*—that is, Fungus-like; the term is usually applied to the papillæ, near the edge of the tongue.

FUNGOID. In surgery signifies a growth, which may be either *simple* or *malignant;* the former is merely an extravagant granulation; when it occurs in wounds we term it *Proud Flesh* (which see); the latter is termed *Fungus hæmatodes* (Bleeding Fungus); it is also known as Soft Cancer, Spongoid Inflammation, and Medullary Sarcoma. In England it is a form of *Encephalosis;* in France, of *Nævus*, or morbid Erectile Tissue.

FUNIS UMBILICUS. The umbilical or naval cord; that which connects the fœtus in the womb with the placenta; its length is little short of two feet. See *Umbilicus.*

FUNNELS for medical purposes should always be made of Glass or Wedgewood-ware; in the latter case, glazed and fluted in the inside. They may be of any required size, from 2 ounces to a pint or more. The most convenient shape is that represented at page 267, under the head of *Filtration.*

FUR. As an article of dress, is one of the most efficient protectors against cold which can be worn, yet much mischief often results from the uncertain and injudicious use of it. As an extra covering in cold weather, to be laid aside indoors, it may be safely recommended; but females who wear boas, and victorines round the neck, are apt, when the friction of the Fur has produced excited action, and its natural result, perspiration on the part covered, to remove the protection without sufficient care as to the state of the atmosphere, and cold, and sore throat is often the result. It is better not to use Fur at all, than to do so fitfully and without due caution. Persons with delicate lungs find great advantage from having it constantly on the chest, next the skin, for not only is it a protection against cold, but its action is that of a mild counter-irritant. Nothing is better for this purpose than the prepared bear and rabbit skins which may be obtained of any hatter or hosier.

FURFURACEOUS (Latin, *furfur*, bran). A term applied to a deposit in the urine which has a branny appearance; it consists chiefly of the phosphates. (See *Urine*). A desquamation of the cuticle is also called *furfur*. See *Skin.*

FUROR UTERINUS. Latin for Uterine Madness. See *Nymphomania.*

FURUNCULUS (Latin, *furo*, to rage). An angry boil, so called from its violent inflammation. *Dothein* was the term applied to it by Paracelsus; we generally speak of it as a *Carbuncle* (which see).

FUSIBILITY (Latin *fusus*, melted or poured out). The property of assuming the fluid state. Thus some of the urinary concretions are called *Fusible Calculi.* They consist of the Phosphates of Ammonia, Lime, and Magnesia. (See *Calculi.*) Again we have *Fusible Metal*, an alloy of Bismuth, Lead, and Tin, which melts at a lower temperature than that of boiling water.

FUSION. By this term we understand the act or state of melting. Those substances which admit of being *fused*, are termed *fusible*, and those which do not, *refractory*. The term *Fusion* is chiefly applied to metals and other substances which melt only at a high temperature; it must therefore not be confounded with *Liquefaction*. By *Igneous Fusion* we understand the melting of certain salts by heat, without undergoing decomposition, and by *Aqueous Fusion* the solution of salts, which contain water of crystallization, on exposure to increased temperature.

GALACTEA (Greek, *gala*, milk). This term is applied either to a morbid flow, or a deficiency of the lacteal fluid; the former has been called *Galacterrhœa*, or milk flux, and we sometimes hear both of these affections called *Mislactation*. See *Milk*, *Suckling*, &c.

GALACTIC ACID, sometimes called *Lactic Acid*. The acid of milk, now believed to be only animalized acetic acid.

GALACTO-PHORUS. (Greek, *gala*, milk, and *phoro*, to carry). A term appled to the ducts of the mammary glands through which the milk is conveyed. See *Breast*.

GALACINE. Is a substance procured from the bark of *Guaiacum* (which see); it dissolves in nitric acid, and forms, in this way, oxalic acid.

GALANGA OR GALANGALE. A species of Maranta, as it is generally supposed, although considerable doubt yet exists; several plants having been introduced and sold under that name. The *Galanga Major*, or *Alpinia Galanga*, which appears to be the true Galangale, is a native of China, and the Malayan Archipelago, has fragrant aromatic roots, highly astringent; it is sometimes used in dyspepsia, and as a masticatory in paralysis of the tongue.

GALBANUM. This is the concrete resinous juice of an evergreen plant, growing in Africa and the East Indies, about the species of which there is much uncertainty. The gum has a very peculiar odour, and a bitter, acrid, and disagreeable taste. Its medical properties are antispasmodic, expectorant, and deobstruent, partaking very much of the nature of assafœtida, than which, however, it is less energetic. It is more frequently employed externally as a stimulant and antispasmodic, than internally; the following are its chief officinal preparations:—Compound Pills of Galbanum, of Assafœtida, and of Myrrh, the dose of either being from 10 grains to 30; Tincture of Galbanum 1 drachm; Plaisters of Galbanum, Simple and Compound, of Assafœtida, and Gum Plaister.

GALEN'S BANDAGE. A name sometimes applied to the four-tailed bandage, or single split cloth. See *Bandages*.

GALIUM APERINA and VERUM. These are the botanical names of two plants belonging to the natural order *Rubiaceæ*, which are sometimes used medicinally; the first is commonly known as *Clearers*, or *Goose Grass;* it has aperient, diuretic, and antiscorbutic properties, and was formerly much used in the treatment of dropsy, scrofula, and congestion of the spleen. The fresh herb made into an ointment with Lard, is a good application for glandulous and scrofulous swellings, and cancerous and foul ulcers. Recently the internal use of this plant has been revived as a remedy for lepra and other cutaneous diseases; it is made into a kind

of diet-drink thus:—a large handful of the herb boiled in 2 pints of water for about half an hour; strain, and take ½ a pint three times a day.

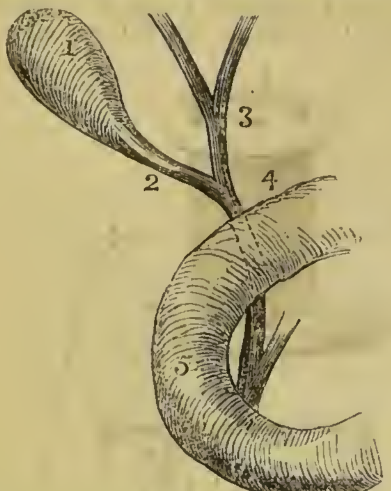
The Yellow Ladies Bed Straw, as the *G. Verum* is commonly called, is a popular remedy for hysterical complaints and epilepsy, and has been prescribed in affections of the brain, in the form of an Infusion, made by pouring 1½ pints of boiling water on 2 drachms of the herb; dose, a wineglassful taken warm, several times a day. In the form of ointment it is applied to scrofulous sores.

Galls. These are excrescences found on the Dyer's Oak, *Quercus Infectoria*, natural order, *Corylaceæ*, and some other species of the genus *Quercus;* they are the result of a morbid action excited in the leaf-buds by an insect, *Cynips Quercus*, depositing its eggs there; the buds, instead of elongating, and becoming branches, enlarge into a globular figure, so as to constitute a fit nidus, or nest, for the forthcoming maggots. The Galls possess peculiar astringent properties in consequence of the large quantity of *tannin* which they contain; they are chiefly used in gargles, lotions, injections, and ointments; the latter being a very effectual application for piles. The Tincture of Galls in Mucilage, is sometimes given with good effect in cases of diarrhœa; the dose of this preparation is from 1 to 2 drachms. Gargles, Lotions, &c., are made of the Infusion, or Decoction, the proportions being about 2 drachms of the Powdered Galls to a pint of water; a drachm of this powder with a scruple of Sulphate of Copper, and 1 ounce of Lard, makes a good ointment for ringworms.

Gallic and *Tannic* acids, already spoken of under the head of *Acids*, are both obtained from galls which owe their astringent properties to them; they are a good deal employed to correct internal hæmorrhages and other discharges; the dose of either is from 2 to 12 grains as an astringent; as a general tonic and peptic, from 2 to 3 grains; rickety children may take from half to a whole grain; as much as 20 grains three times a day has been given in chylous urine.

Gall-Bladder. The receptacle for the *Bile* (which see). It is situated on the concave side of the liver, and lies upon the colon, part of which it tinges with its own yellow colour; it is about the size of a small hen's egg, and the shape of a pear, as shown in the annexed diagram. No. 1 being the bladder itself; 2, a duct proceeding from its under extremity, and running into another from the liver, (3); the two together form what is called the bile duct (4), which enters the descending portion of the duodenum at

5. This bladder must be sought for beneath the right lobe of the liver, at about the boundary line between the epigastric, and right hypochondriac region. (See *Abdomen*). The bile secreted by the liver is here collected, retained for a certain time, until rendered more fit for its office by admixture with the peculiar produce of the bladder, and then expelled. "The gall bile and bilious system," says an eminent authority, "are to be regarded as the results of the secretions of the nitrogen of the air by the skin. The oxygen is fixed and secreted by the lungs; the one sustaining the arterial circulation, and the other the venous. Their action and reaction is healthy animal life, any disturbance is disease, and the arrestation of either is death."



We should mention that the Gall-bladder is composed of four membranes, or coats—the common, the vascular, the muscular, and the nervous; which last has a wrinkled surface within, and is furnished with an unctous liquid.

Gall Sickness. The Walcheren fever, which proved so fatal to the English in 1809, and one of whose permanent symptons was vomiting of bile, was popularly so called. See *Bile*, *Fevers*.

Gall Stones are calculous concretions, sometimes formed in the bladder, from the peculiar crystalline ingredient of the bile termed *Chloresterine;* they vary greatly in size, some being smaller than a pea, and some as large as a walnut; they often remain in the bladder without causing any uneasiness; but, when one of any considerable size passes into the duct, it gives rise to violent spasmodic pains, which cease only when the stone has effected its passage into the bowels. The Gall duct is, in calibre, no larger than an ordinary goose quill, and therefore this operation is often a difficult and protracted one; its symptoms are agonizing pain in the region of the bladder, often accompanied by shivering and vomiting; when the obstruction has passed into the common duct, and so stopped the flow of bile from the liver, there will be *Jaundice* (which see), with white and chalky evacuations. When there are these symptoms, with absence of pain on pressure, and no fever, we may safely conclude that inflammation is not the exciting cause, but Gall-Stones; their presence in the fœces may be easily detected, as they float upon water. The proper *treatment* in an attack of this kind is hot applications over the seat of pain, or a warm bath. A draught should at once be given of Laudanum, a full dose of 30 drops. following it up with 20 drops every half-hour or so, until the severe pain is relieved; if the patient retches much, and liquids cannot be retained, pills of solid Opium, 1 grain each, had better be administered. There is commonly great acidity of the stomach while Gall Stones are passing; hence an alkaline draught is of service, say half a teaspoonful of Carbonate of Soda in a good quantity of warm Water; the Laudanum may be added to this. Should the stomach reject these remedies, the anodyne must be administered in a Clyster, of about 40 drops of Laudanum in a pint of thin Gruel. Hot Bran Poultices, sprinkled with Laudanum, may be applied to the seat of pain.

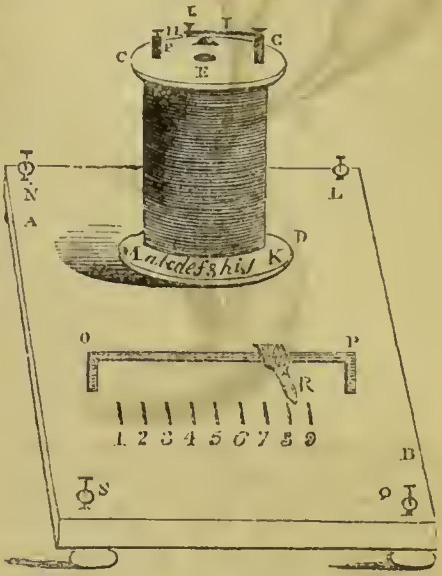
The following is a good solvent mixture where Gall Stones are known to be present:—Castile Soap, 2 drachms, melt by heat in ½ a pint of water; add Spirits of Turpentine and Ether of each 2 drachms; take a tablespoonful three times a-day.

Galvanism. A form of electricity, so named from its discoverer Galvani; it is usually elicited by the mutual action of various metals and chemical agents upon each other, Copper and Zinc and Sulphuric Acid being those most commonly employed. It is sometimes called *Voltaism*, on account of the additional discoveries made by Volta, and sometimes *Animal Magnetism*, from its effects on the muscles of animals newly killed. Under the head of Electricity, we gave a description, with a cut of an Electrical Machine; we will now describe a Galvanic Battery, that our readers may understand the difference in the two methods of exciting and liberating the subtle fluid. The most simple apparatus of this kind that can be used is a set of tumblers, any even number will do, according to the strength required; about half fill them with water slightly acidulated with Sulphuric or Nitric Acid, and place them close together in a row; put into the tumbler at one end a broadish strip of zinc, and into that at the other a similar strip of copper, and in each of the intermediate ones a strip of both metals with their flat sides together. Connect the whole by means of a bent wire passing along the top, through this the galvanic current will pass, and also through the body of any person who places one hand on the outer zinc and the other on the outer copper strip, these being the positive and negative poles of the battery.

The Galvanic Pile may be made in this way: Take 20 or 30 pieces of zinc, each as large as a penny, as many pieces of copper of the same size, and as many of cloth or paper, which last are to be dipped in a solution of salt and water; then build the pile by placing the pieces in this order—zinc, paper, copper; let it stand on a piece of board, and be kept in its position by rods of glass, or varnished wood. Then, if the hands are wet, and one placed at the bottom of the pile, and the other at the top, a slight shock will be felt; and this will be the case every time one hand is withdrawn from the pile, or placed on it—thus breaking or establishing the electric current passing through the system.

The Galvanic Trough, a very powerful apparatus, is composed of zinc and copper plates placed in pairs, so that the zinc is always presented towards one end, and the copper towards the other. When the trough is nearly filled with water impregnated with Nitric or Muriatic acid, and the points of the wires which connect the two end plates are brought together, the action is very powerful; sufficiently so, when the plates are large and numerous, to decompose water, fuse metal, and work other chemical changes which can only be effected by intense heat.

Galvanic action is now applied to a great variety of useful purposes connected with art and science; it differs from that of Electricity, as formerly applied, in being continuous, the fluid being renewed as fast as it is used; and therefore it never exhausts itself whilst the materials remain which produce it. The patient to whom it is applied is only sensible of its application at the commencement and finish thereof, and not then unless the current is very strong. Perhaps the most cheap and effectual apparatus which one, requiring its application, can have is the *Galvanic Coil*, of which we give a cut, with directions for its construction.



AB is a rectangular piece of board, upon which is fixed vertically a hollow cylinder of wood, CD, wider at the bottom, like a reel, but not quite so wide at the top. Inside this cylinder is dropped a piece of bar iron, E, which rises slightly above its surface. On one side is a brass upright, F, from which proceeds a piece of watch-spring, H, having at its end a small cone of iron which nearly touches the bar, E. On the opposite side is an upright of brass, G, from which proceeds a flat piece of brass, I, through which passes a brass screw, J, having at its extremity a small piece of platinum, which comes in contact with another small piece of platinum fixed on the watch-spring, H. Round the wooden cylinder, CD, is wound some covered copper wire (No. 12 or 14) nine times (more or less as the number of powers required) at right angles to its axis, so as to constitute nine helices, which are connected, and together form one helix continued within itself. The interior is the first, the exterior the last helix. The winding of the wire should proceed from the top of the cylinder, leaving a piece about one foot in length, which, passing down laterally between the interior of the first helix and the wooden cylinder, and emerging at bottom, is pushed through a hole at K, passed under the board, and connected with the bottom of a binding screw, L. The last coil of the first helix is then laid bare, by removing the covering away a little at each side; and to this is fixed piece of uncovered copper wire, which is pushed through a hole at A, and connected under the board with an upright piece of brass wire, 1. The top of the second helix is next laid bare, and connected in a similar manner with the upright piece of brass, or power 2, by a piece of copper wire passing downward between its interior and the exterior of the first helix, and through a hole at *b*. And so from top and bottom alternately, are the remaining helices connected with the other powers; thus, the bottom of the third helix through the hole at *c*, with the 3rd power; the top of the fourth, &c.; until the top of the eighth is connected with the 8th power. Then the exterior end of the continued helix, which is the bottom coil of the 9th helix, is passed through a hole at *i*, and connected with the bottom of power 9; which power is also connected with a wire passed upwards through a hole at *j*, then along the outside of the helix and through the top of the cylinder, with the bottom of the upright G. The binding screw N is similarly connected, through a hole at M, with the upright F. The wire which passes under the board from N to M, is joined in the middle to another piece of wire connected with the bottom of the binding screw S. Between the cylinder and the powers is fixed a piece of brass wire, O P, bent twice at right angles, the bottom of which is connected with the binding screw Q. This brass wire has a moveable piece of brass, R, which may glide along it, and rest on either of the powers required. The coil should be covered with leather, the bottom of the board with baize. Care should be taken that there be no metallic contact any where, except in the parts mentioned. The coil is then complete; its expense is 16s. L and N are screws for battery, S and Q for patients. In galvanizing invalids it is a matter of primary importance that the cross current should have the same direction as the nervous fluid. It is a forgetfulness of this which renders futile the attempts of many galvanists. Again, the instruments sold by philosophical instrument makers have generally two continued helices; in one of which the voltaic circuit is completed, in the other a current is induced, which is utterly useless as a remedial agent.

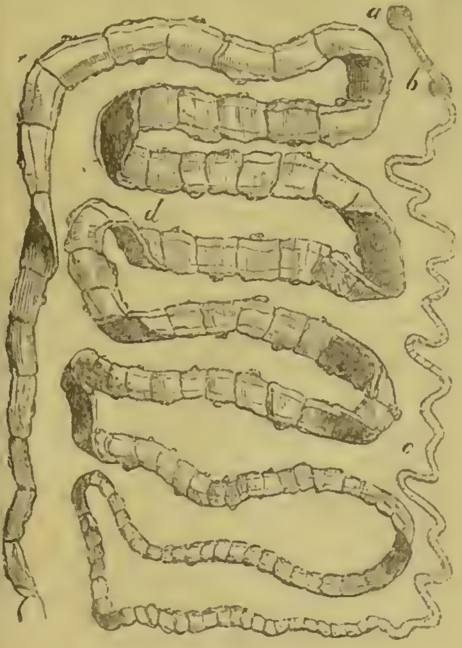
Medical Galvanism. Has of late come much into use; the following remarks, by one who fully understands both the theory and practice of it, will show how it should be applied, and the special diseases to which it is most applicable:—"There are some diseases in which the existing electricity in the body should be *increased*, to bring about a cure; and, on the other hand, others which require it to be *decreased*. It is, therefore, requisite for the Medical Galvanist to ascertain, by the nature of his patient's complaint, whether the electric fluid already circulating in the nerves is too plentiful, or insufficient: if the former, he must decrease it; but if the latter, increase it. Now, to increase the electric fluid in the system, we must apply the positive pole, or electrode, as it is sometimes called, to the hands, feet, or part affected, and the negative to the spine, or back of the neck. To decrease it, we must reverse this arrangement, and place the positive pole on the back, and the negative on the hands, feet, or part affected. We now give a list of those diseases requiring to be increased, and those for decrease of electricity:—

Increase.	*Decrease.*
Amenorrhœa.	Cramp.
Asphyxia.	Epilepsy.
Deafness.	Headache.
General Debility.	Neuralgia
Hysteria.	Profuse and Painful Menstruration.
Indigestion.	Rheumatism.
Paralysis.	Tic Doloreux."

The principal effects of *Electro-Galvanism*, as it is sometimes termed, appears to be that of a powerful stimulant to the nervous and muscular systems; but, besides this action, it appears to have the power of allaying pain and irritability in the part to which it is applied; the reason of this is by no means apparent, and the use of the agent must therefore, for the present, be to a certain extent empirical, even by such eminent scientific men as Doctors Jones and Wilson, who have recently been employing it with marked effect in *Tetanus* (which see).

A very convenient, because portable instrument, in relation to our present subject, deserves mention here; it is Springfellow's Electro-Galvanic Pocket Battery, which is small enough to be carried in the waistcoat pocket. The Electric Chain, or Belt, of Pulvermacher is also a recent mode of application of Electro-Galvanism to curative purposes, and worthy of comment. We have seen good effects produced by both these appliances, in neuralgic and other cases. See *Magnetism.*

GAMBOGE. This well known yellow gum resin is the produce of an uncertain species of Garcinia found in the East Indies. It is powerfully drastic, cathartic, and hydragogue, very irritating to the stomach, and likely to cause vomiting; hence its frequent employment for the expulsion of the tapeworm (for a description of the cut of which, here given, see *Worms*). Of most remedies for for this parasite, Gamboge forms an ingredient. It is not often given alone as a purgative, on account of its tendency to produce vomiting and griping; but, in combination with other cathartics, it operates more favourably; combined with Bi-tartrate of Potash, it is useful in dropsical affections; in solution with Alkalies, it acts as a diuretic. The dose of the Powdered Gum, as a full purgative, is from 2 to 6 grains; as an alterative from ½ a grain up to 6 grains; of the Compound Gamboge Pill, and that of Gamboge and Scammony, the dose is from 1 to 3 five grain pills; of the Alkaline Tincture, we give from 30 to 60 minims; and of Swediaur's; or the Ammoniated Tincture, 1 drachm; this latter should be given with great caution. For the expulsion of worms, the following is a good formula: Of Gamboge, 10 grains; Sulphate of Iron, 6 grains; Lump Sugar, 20 grains; and Oil of Peppermint, 3 drops: 1 ounce to be taken every four hours, until the desired effect is produced.



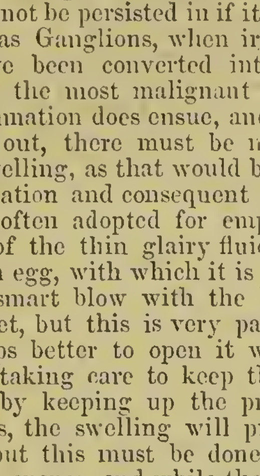
GAME. By this term we usually understand most of the wild creatures, whether furred or feathered, quadruped or biped, which are the objects of pursuit with sportsmen; legally the term only includes Hares, Pheasants, Partridges, the several kinds of Grouse and Buastards. The Snipe, Quail, Landrail, Woodcock, and Coney, are not game, strictly speaking, although they may not be shot by unlicenced persons. But it is with Game, as an article of diet, that we have here to do, and generally it may be recommended as safe and wholesome; as it contains a smaller proportion of oily and fatty matter than most flesh. It is too commonly, however, eaten in such a state of semi-putrefaction as to render it extremely objectionable; it may be known to be too "high" for safe eating when air bubbles are observed near the bones, and the meat, on being cut, gives out what can hardly be called a crackling sound, but a sensation, to the carver. This is owing to the evolution of Carbonic Acid gas, and in this state Game sometimes acts as an irritant poison. The best remedy is to give a full dose of Castor Oil, with about 20 drops of Laudanum, as the irritant matter will have passed beyond the stomach before the symptoms show its deleterious nature, and therefore emetics or the stomach pump would be useles. If there are colikey pains after this, give Calomel and Opium, 1 grain of each, about every quarter of an hour. The best way to preserve Game is to enclose a piece of charcoal in the body, out of which the viscera have been removed, close the skin by sewing, and tie a piece of string tightly round the neck to exclude the air; (for best methods of cooking, &c., see *Wife's Own Book of Cookery.*)

GANGLION (Greek *gagglion*, a nerve-knot). This is a knotted enlargement in the course of the nerves; it occurs, 1st, near the roots of the sentient nerves, including the larger portion of the fifth pair, and the posterior branches of the spinal; 2nd, in the sympathetic nerves, &c.

The several Ganglions of the body may be divided into 1st, those of the head; 2nd, of the neck; 3rd, of heart; 4th, of the chest; 5th, of the abdomen: and 6th, of the back; in most of these divisions there are several distinct Ganglia, but it would answer no good end to occupy our space with an enumeration of them. They are all well known to anatomists, and distinguished by particular names. (See *Nerves*).

A morbid enlargement in the course of a tendon, or aponeurosis from effusion into the theca has also been termed Ganglion, or "small brains," as some have called it, from the likeness it presents to the cerebral convolutions.

It is to this kind of Ganglion that we must devote our attention chiefly, as it is the result of disease, and therefore open to treatment. This encysted elastic tumour, which is formed in the sheath of a tendon, generally makes its appearance in the hand or the foot; it is not usually painful, but simply inconvenient, especially if, as is sometimes the case, it attains a large size, in that case it obstructs the necessary motion of the part, and by causing inflammation, produces pain. This Ganglion is usually the result of an accident, such as a sprain or bruise; it may be treated by compression and friction; Camphorated Mercurial Ointment may be rubbed in, or any stimulating linament, and continued pressure maintained by binding a piece of sheet lead firmly over it with a bandage. This *treatment*, however, must not be persisted in if it causes inflamation, as Ganglions, when irritated too much, have been converted into fungous diseases of the most malignant character. When inflamation does ensue, and a fungus is thrown out, there must be no incision into the swelling, as that would be likely to cause ulceration and consequent sloughing. The plan often adopted for emptying the Ganglion of the thin glairy fluid, like the white of an egg, with which it is filled, is to give it a smart blow with the hand, or a small mallet, but this is very painful, and it is perhaps better to open it with a very fine knife, taking care to keep the air out, and then by keeping up the pressure for some weeks, the swelling will probably be reduced; but this must be done before inflammation ensues, and while the tumour is yet fresh. A Ganglion below the knee has been sometimes cured by means of a blister; but when it resists all curative efforts, and becomes a source of real pain and inconvenience, it should be removed by dissection of the part, care being taken not to break the cyst and let the fluid escape, and also to remove every particle of the tumour. Only a surgeon can perform this operation; and, indeed, the greatest professional skill and experience is required in the treatment of this disease. The accompanying cut will exhibit the structure of a true nervous Ganglion; it is that of the lumbar region, taken from a young dog, and rendered transparent by being soaked in an alkaline solution:—*a* is the posterior root of the spinal nerve, *b* its anterior root, *c* Ganglion on the former, *d e* junction of the fibres of the two roots with those coming from the Ganglion, and the posterior and anterior trunks of the nerve.



GANGRENE (Greek *graino*, to eat). The first stage of mortification, so called from its eating away the flesh. "Gangrene," says Sir Astley Cooper, "may be considered as a partial death—the death of one part of the body while the other parts are alive." Its *causes* are excessive inflammation, which occasions a destruction of vital power in the part or parts which it attacks; or it may be a less degree of inflammation acting upon a part the vital powers of which are feeble, locally so; or showing the general debility of a weakened constitution. In this case, Gangrene sometimes supervenes without any great amount of previous inflammatory action. A broken, or otherwise wounded, or ulcerated limb is most commonly the seat of Gangrene, or it may be the fingers or toes, after they have been frost-bitten or jambed, or in some way deprived of their nervous energy.

Symptoms.—When the result of high and active inflamation, there is severe pain in the part attacked, and generally a considerable degree of swelling; a blush overspreads the part, which gradually deepens to a dull purple, or brownish red; if there is a running sore, the discharge from it will cease; very soon the cuticle will be raised by a vesication, from which, on breaking, will issue a bloody serum, after which the skin assumes a decidedly gangrenous appearance, that is, it becomes of a dull yellowish green colour, and is perfectly insensible. During the progress of these changes there is great constitutional derangement, marked by a high degree of irritative fever, with a small, weak, quick pulse, generally irregular, and sometimes intermittent; often, too, there is vomiting and delirium, and hiccough, which is one of the most characteristic signs of the disease in its more advanced stage, especially when Gangrene arises from a diseased state of the constitution; then, as Sir A. Cooper remarks, "the stomach is extremely deranged, and this derangement of the stomach is followed by a spasmodic contraction of the diaphragm, producing the cough. This symptom, therefore, does not arise from any alteration in the action of the diaphragm, but from its sympathy with the deranged state of the stomach." When Gangrene is the result of a low degree of inflammation acting upon a weak system there will probably be an absence of the febrile symptoms, or they will be but slight; there will be the same discolouration of the skin, vesication, discharge of bloody serum, and morbific appearance; this is also the case when the disease is produced by extreme cold.

Treatment. In the active inflammatory stage, local depletion by means of leeches should be resorted to, and also bleeding from the arm if the state of the patient's system is such as to warrant this; but not more than 8 ounces of blood should be taken at one time, lest the vigour of the circulation be too much diminished, and, as a consequence, the nervous power of the constitution also. Soothing fomentations and warm poultices should be applied to the part; Calomel, or some other mercurial preparation, should be administered, to keep the secretions of the liver and intestinal canal in a proper state, and opiates to tranquillize the system. When Gangrene is the result of cold, the treatment will be somewhat different. In this case the part affected becomes first white, and a restoration of the suspended circulation should be attempted by rubbing with Snow, if it can be procured; if not, with a coarse cloth or flesh-brush. No heat must be applied; even that of the bed-covering will sometimes set up inflammation. Camphorated Spirit of Wine is, perhaps, the best linament that can be used. After the rubbing, if it appears to be at all effectual, apply cold poultices. If, in spite of these efforts, a discolouration of the skin shows that Gangrene has really commenced, apply some gentle stimulus to the part, such as a poultice of Linseed Meal mixed with Beer-grounds, and also Spirit lotions, to keep the disease from spreading. The constitution of the patient must be soothed and supported by some anodyne and stimulant: Sir A. Cooper recommends from 7 to 10 grains of Carbonate of Ammonia, with 20 or 30 drops of Tincture of Opium, two or three times a day, or more frequently if required. At Guy's Hospital, a bolus composed of 5 grains of Carbonate of Ammonia, with 10 grains of Musk, is given every four hours in such cases, with excellent effect. Bark was formerly much used, but Quinine has now taken its place. When the Gangrene has proceeded to a sloughing sore, a Port Wine poultice is a good application, as is Spirits of Turpentine, to stimulate the parts.

If, however, the Gangrene is not stopped in its first stages, it can seldom be after; and the only chance of saving the patient's life is to amputate the limb; and this must be done before the morbific influence has spread far towards a vital part. (See *Mortification*).

Hospital Gangrene, known also by the various names of *Phagedæna*, *Gangrænosa*, *Gangrena contagiosa*, *Hospital Sore*, *Putrid* or *Malignant Ulcer*, is a combination of Humid Gangrene with Phagedenic Ulceration, sometimes occurring in crowded hospitals, and causing a fearful mortality among the patients. *Gangrena oris* is a disease which affects the cheeks or gums of infants; it also sometimes occurs in the *Pubenda* (which see).

GAPING or *Yawning*. Is a symptom of nervous exhaustion, and depressed circulation, which may arise from functional or organic disease, probably of the chest. We generally gape when we are tired, and the act sets others gaping also; this imitation is common in nervous affections. Previous to an attack of Hysteria with fainting, or of Spasmodic Asthma, there is often this symptom; and where fits of gaping are long and frequent we may always suspect the existence of heart disease.

GARGLE (Latin, *gargarisma*, from the Greek *gargarizo*, to wash the throat). A lotion or wash for the throat. Its application is effected by taking a mouthful of the liquid, throwing the head back, by which movement it is passed into the throat, and then expelling the air from the lungs through it, agitating and causing it to wash every part of the inner surface. The nature of Gargles must depend upon the symptoms which they are designed to relieve; they may be astringent, demulcent, or cooling, according to the requirements of the case; if there is inflamation of the tonsils, a simple Warm Water or Gruel Gargle, with a little Vinegar, is perhaps the best to begin with; a common domestic form is Sage Tea and Vinegar, and this is very good: when the inflammation becomes more chronic, and there is much phlegm about the throat, the Gargle must be more stimulating and astringent; therefore, add to 6 ounces of Infusion of Roses, 1 drachm of Dilute Sulphuric Acid, and the same of Tincture of Capsicum, and use frequently: if there is relaxed uvula, dissolve 1 drachm of Alum in ½ a pint of hot water, add 2 drachms of Tincture of Myrrh, and use: for chronic weakness, with frequent tendency to inflammatory swelling, gargle with Decoction of Oak Bark, or a weak solution of Common Salt every morning: if there is ulceration of the fauces, the following is a good form: Take of Refined Saltpetre 2 drachms; dissolve in 6 ounces of Plain or Rose Water, and add Honey 4 drachms. Many other forms might be given, but the above will be sufficient; the more especially as others will occur under the heads of *Throat*, *Tonsils*, *&c.*

GARLIC (*Allium Sativum*). An account of the medical properties and uses of this well-known plant will be found under the head of *Allium*. Its only officinal preparation is the Syrup of Garlic, of which the dose is from 1 to 2 drachms. One great objection to the use of this and other members of its tribe is the unpleasant odour communicated to the breath: a powerful antidote to this are the seeds and aromatic leaves of parsley, and other plants of the *Umbelliferæ;* they may be taken with or after it, but the former is best.

GAS. An old Teutonic word, signifying air or spirit, and now applied to any permanent aëriform fluid. Gases retain their elasticity in all temperatures, and are thus distinguished from *vapours*, which condense at a low temperature, and become *liquids* or *solids;* therefore, we call Gases, *Elastic* or *Gaseous Fluids*. The number of these is so great that we cannot give a complete list of them; neither would a general description be at all serviceable, as they possess, in many respects, very different characters and properties, each Gas consisting of the ponderable matter from which its name is derived, and just that degree of specific heat necessary to its aëriform existence; thus some Gases are much more volatile than others; some are inflammable, some not; some mix readily with the air we breathe, and so enter into the circulation, producing beneficial or other effects, according to their nature; others hold themselves altogether apart from the surrounding atmosphere—they are in it, but not of it, and if brought into contact with the respiratory organs of man, or any other animal, cause immediate asphyxia, because they are unfitted for the delicate organization into which they enter; the most familiar example of this kind of Gas which we could cite is the *Carbonic Acid* (which see), although this is composed, to a great extent, of oxygen, which is necessary to animal life, yet having a large proportion of carbon, about one-half, it is mechanically too thick and ponderous to pass through the pores of the lungs, and adminster to the vital necessities of the animal system.

Gases, in their various combinations, enter into the composition of almost everything we eat and drink; thus Oxygen and Hydrogen form water, and Nitrogen composes part of most animal matters, except fat and bone, as well as of most of the vegetable alkalies; although of itself fatal to animal life, yet it is an important constituent of the air we breathe, and of the nutriment on which we chiefly subsist. This is one of the apparent anomalies of natural philosophy; these are, perhaps, nowhere more numerous than in the world of gases, which are at once food and deadly poison; sources of light and heat, and of darkness, and cold; for instance, Sulphuretted Hydrogen burns with a bright flame; Azote extinguishes flame. There are several Gases which have an exhilarating effect upon the spirits, others cause depression and drowsiness, and death; some are so light and volatile that they rise, and rise, far above the atmosphere that immediately surrounds our earth, and if imprisoned in a silken bag, will even carry up a ponderous machine with its paraphernalia of sand bags and grapnels, and freight of daring aeronauts; others are so dull and heavy, that in the damp air of wells, and the deepest mines, they lie lowest, and refuse to rise. Gases pass hither and thither without sound or visible manifestation, and offer so little resistance that a feather waved in the gentlest manner will pass through, or set them flying, and yet, combine them in certain proportions, enclose them in iron tubes or spheres, strike a sudden blow upon their prison, and there will be a thundering sound, and the exhibition of an explosive power greater perhaps than that of any known agent; Gun-cotton, Gunpowder, and the various detonating compounds all owe their wonderful and fearful effects to the liberation and expansion of Gases! Nay, may we not attribute the grand phenomena of thunder and lightning to the same cause? It would please us well to go fully into this subject and show how intimately connected are these invisible substances called Gases, which, some hurtful and some beneficial, ever surround us, like good and evil spirits, with all the terrestrial phenomena which we witness; but they would lead us away from the consideration of subjects with which we are now immediately concerned.

Dr. Priestley has discovered that Gases can pass through bodies that are perfectly impervious to common air, and this discovery has let us into the secret of how certain constituents of the atmosphere act upon the blood in the lungs. Dr. Mitchell has shown that Ammonia, a subtle and volatile Gas, passes through a certain membrane 160 times as fast as Carbonic Oxide; so we see that membranes may act as strainers, letting through some gaseous liquids, and retaining others. By combining the condensing powers of mechanical compression, with depression of temperature, Dr. Faraday has been able to liquify some Gases and solidify others, so that what was once an invisible vapour merely, floating in, or combined with, the atmosphere, may be presented to us in the form of solid white crystals. Some of the Gases, however, have never yet been reduced to a more dense and ponderous form than that of vapour. Hydrogen, Nitrogen, Oxygen, and Carbonic Oxide are among these; but to these incondensible Gases, the same law holds good as that which applies to common air—they all suffer diminution of volume in proportion to the pressure to which they are subjected. Ammonia; Azote or Nitrogen; Carbonic Acid; Chlorine; Hydrogen, simple, carburetted and sulphuretted; and Oxygen, are the Gases which principally concern the subjects of health and disease of which we have here undertaken to treat; and of these more particulars will be found under their several heads.

Of the effects of memphitic exhalations, or noxious Gases, arising from the decomposition of decayed animal or vegetable matter, we have already spoken, in treating of *Ague*, *Fever*, *Contagion*, *Drainage*, &c., (which see). There is one other branch of our present subject which is closely connected with sanitation, viz.: the use of Gas for lighting and cooking, which has of late become so prevalent; and on this we must offer a few remarks. The Gas commonly used for these purposes is the result of the destructive distillation, in closed vessels, of some organic inflammable substance, such as coal; it is a compound of Carbon and Hydrogen, and burns with greater or less brilliancy, according to the relative proportions of these constituents, and its freedom from sulphuric or other vapours. The Gas we generally burn is very far from pure; it is, in fact, Sulphuretted Hydrogen, as may be known by its disagreeable smell and tendency to blacken all with which it comes in contact; indeed, were it perfectly pure, it would be scarcely applicable to the various economical purposes to which it is now applied, although it might be, if much purer than it now is. There can be no question about the great advantage derived from lighting our streets and public buildings with Gas, whether in a moral, sanatory, or economical point of view; light is a great repressor of crime, flame a purifier of the atmosphere, and Gas must be cheaper and every way better than the old, clumsy, cumberous, and inadequate system of oil-lamps. Still, grave doubts may be, and are entertained, as to whether the extensive use of Gas in the house is not prejudicial to health. We have been often asked this question by persons anxious to avail themselves of the advantages afforded by Gas, yet fearful of imperiling the health of themselves and families; and we have said to such anxious inquirers—"By all means, let the subtle fluid cook for you, and diffuse light, and warmth, and comfort through your dwellings. We would not exclude it even from the bedrooms, only take care that the house be properly ventilated, that there be a frequent admission of fresh air to supply the waste of oxygen which is consumed alike by the flame, and the lungs of the breathers in a confined space, and to dissipate the deleterious fumes which arise from the consumption by heat of either Gas, or any fatty matter, and perhaps more thickly from the latter than the former." Where artificial light must be had, it is better supplied by Gas than by any other agent with which we are at present acquainted, and in a properly ventilated house it can scarcely be used too extensively. We have it in our own bedroom, often burning all night, the branch is near an open fireplace, and this should always be managed if possible. In sick rooms or nurseries, where a light is always required, how much better is this than rushlights, floating-wicks, or any other contrivances. It may be reduced to a mere speck; and, in an instant, increased to any required extent. By the addition of a slight wire framework to the pipe, to support a tin or other vessel, water, or any kind of food, may be kept hot, and so the necessity for a fire obviated. Depend on it there is no night-lamp like a Gas-lamp, and for lighting, and at the same time warming a house in winter, there is no agent like Gas: the air which it heats and rarefies ascends to the upper part of the room, and if it has there a means of escape, it will carry off the deleterious particles with it, and the fresh air occasionally introduced by the opening of the door, will freshen the lower atmosphere and keep it supplied with the life-sustaining principle. For Gas cooking, as well as lighting, the most convenient apparatus can now be had at a trifling cost; and leaving our readers to judge for themselves, as they easily may do, of the merit of these various contrivances, we again say—By all means *burn Gas*, and as an inducement for them to do so, we add a few practical directions from "Facts for Everybody* :"—"In situations where Gas is to be obtained, it forms a ready, and, for some purposes, very economical means of obtaining heat; its economy does not arise from its cheapness compared with other means, but from the fact that it need not be lighted till the instant it is required, and can be as quickly extinguished when it has done its required duty. For heating any vessels containing liquids, especially if the heat is required to be only of short continuance, Gas will be found extremely advantageous; a ring-burner, constructed as shown in fig. 1, less than three inches in diameter, will quickly boil a gallon of water in a metallic vessel. Burners of this description are usually used in the laboratory, surrounded by a case made of sheet-iron or tinned plate, as fig. 2. This serves to support the vessel to be heated, to steady the jets of flame, and to conduct every portion of hot air against the bottom; the door also gives a ready access to the burner for the purpose of lighting the Gas.

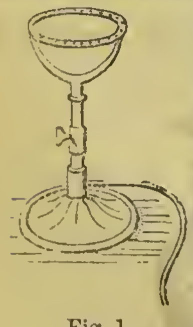


Fig. 1.

"For the domestic use of Gas in heating, there is no contrivance so useful as the following: a circular hole, from two to fo or more inches in diameter, is cut in th dresser, through which is passed a sheet-iron tube, supported by three little elbows. This tube projects a few inches above the table, and about a foot and a-half below; its lower end is open, and into it projects a Gas-pipe, furnished with a stopcock; the upper extremity is covered with a sheet of wire gauze, similar to that used for blinds, on which, as shown in fig. 3, may be placed some pieces of pumice-stone, surrounded and kept together by a broad ring—neither the pumice-stone nor the ring, however, are essential parts of the contrivance. The action of this arrangement is as follows:—When the Gas is turned on it escapes from the pipe, rising through the tube, and mixing with the air contained within it; this mixture then escapes through the wire gauze, and may be lighted on its upper side, without passing through it to the Gas below. The flame should be perfectly free from smoke, which indicates too much Gas—should be pale, colourless, and not soil any bright metal placed in it. If the flame is in the slightest degree yellow, it will do this, and then the Gas should be partly turned off; on the contrary, if there is not enough Gas, the flame will be extinguished. When lighted the pumice becomes red-hot, and throws out a great heat. When used in boiling, the vessel should be supported a short distance over the flame by a trivet; if it is made to

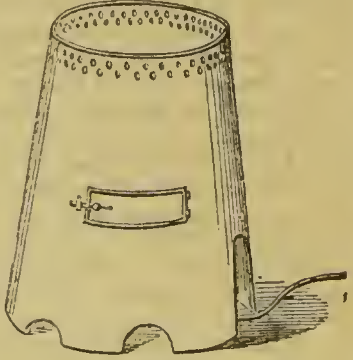


Fig. 2.

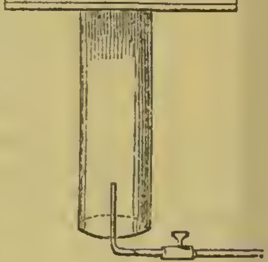


Fig. 3.

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*Published by Houlston and Wright.

rest on the top of the ring, and is sufficiently large to close it entirely, the current is stopped and the flame extinguished, whilst the unburned Gas still escapes below. This contrivance is most useful, it is lighted in an instant, is perfectly free from smoke, and no unburned Gas escapes; it throws out great heat; and may be employed to heat bright tools with much more convenience than a charcoal fire. The objections to its use are, that, in burning, it produces, as all gas does, a quantity of carbonic acid gas, deteriorating the air, and that the flame cannot be very much enlarged or diminished; so that if fires of different power are required, two or more of the contrivances must be put in order. Otherwise, the instantaneous action, small cost, great heating power, and cleanliness of the plan, strongly recommend it. In summer weather, in many small families, it can be made to dispense altogether with the use of a fire. By a little variation, the whole contrivance may be made to stand on the table like fig. 1. In this and other cases, vulcanized India-rubber will be found to form by far the best kind of flexible tube, being quite impervious, very durable, and excessively pliant. Those who wish to try the experiment of heating on this plan may readily do so by covering the top of the glass chimney of any common burner with a piece of wire gauze, folding it over the sides; the Gas may then be turned on, and lighted above the gauze, after it has mingled with the air in the chimney; a small burner, however, does not afford sufficient Gas for the purpose, and, there being too much air, the flame is weak and liable to go out."

Gascoin's Ball or Powder. A composition of Bezoar, with Gypsum, or of Pipe-clay tinged with Ox-gall; it possesses astringent and absorbent properties, and was once a favourite remedy for relaxed bowels, especially resulting from the irritation of teething in children; it is now but little used.

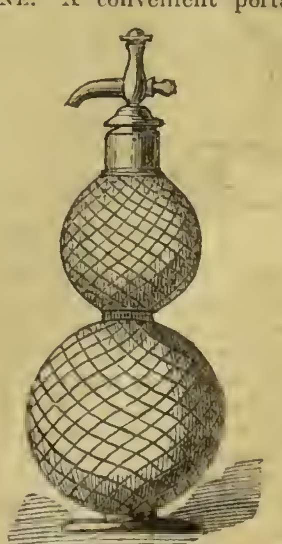
Gastric (Greek *gastor*, the stomach). Appertaining to the stomach, the digestive fluid which is termed the *Gastric Juice*; the peculiar office of this acid, viscous secretion, is the reduction of the albuminous and gelatinous portions of the food to a state fit for absorption into the system. Gastric Acid is a term which has sometimes been applied to this fluid, and sometimes to a mixture of Muriatic and Vegetable Acids, See *Aliment*, *Digestion*.

The most remarkable quality of this secretion is its solvent power, which it possesses even when taken out of the body, it has also an antiseptic property, as it suspends putrefaction, and restores the freshness of tainted meat: analysis shows it to consist of an organic substance called *Pepsine* (which see), another substance resembling extract of flesh, a matter resembling saliva, free acids, especially muriatic, mucus, a little albumen, and various salts.

Gastritis comes from the same root and signifies inflammation of the *stomach* (which see). Then we have also *Gastrocele*, Hernia of the stomach; *G. cnemii*, muscles, of which the calf of the leg is chiefly composed, (see *Leg*, *Muscles*); *Gastralgia* or *Gastrodynia*, pain in the stomach; *G. enteritis*, inflammation of the gastro-intestinal mucous membrane; *G. epiploic*, belonging to the stomach, or omentum, applied to a branch of the hepatic artery, lymphatic glands of the abdomen, &c.; *G. raphe*, a suture uniting a wound of the belly, or of some of its contents; *G. splenic omenta*, a term applied to the laminæ of the peritoneum, which are compressed between the spleen and the stomach; *G. tormia*, the operation of opening the abdomen. (See *Cæsarian operation*).

Gastrotomy, also, signifies the act of cutting open the body: an operation sometimes resorted to in desperate cases, such as a rupture of the uterus, and escape of the child into the peritoneal cavity, in which case it is the only chance for life; the sewing up of the abdomen after such an operation would be called *Gastroraphy*; and an examination of the abdomen to detect disease, *Gastroscopy*.

Gazogene. A convenient portable apparatus for producing effervescing beverages such as Soda-water, Ginger-beer, Lemonade



&c., which by its aid can be made fresh and sparkling, and at a trifling cost. We give a cut of this simple machine and recommend it strongly, not only as an adjunct in the treatment of the sick, but for general family use. Any chemist and druggist can furnish it.

Gelatine (in Latin *gluten animale*), is glue or jelly, prepared in digesters from the skin and bones of various animals; it consists chiefly of *Gluten* (which see) and is highly nutritious. It was not long since a fashionable remedy for intermittent fever, but, except in so far as it strengthens the general system, and so enables the patient to withstand the disease, is of no virtue whatever. To diminish the acrimony of saline and sulphurous baths, or to make a simple emollient bath, it is sometimes used, from 12 to 24 ounces of it being dissolved by heat in a quart of water, and then added to the bath. *Isinglass* and *Jelly* are two well known forms of Gelatine, of which we shall speak under their proper heads. (See also *Glue*, *Size*).

Gelatine has of late been much used in the preparation of capsules in which Copaiba, Cod Liver, and Castor Oil, and other medicines likely to cause nausea, may be taken without being tasted; also as a coating for pills of various kinds. The soluble Gelatinous Capsules, and the Gelatined Pills may be obtained of any druggist. The superior kinds of Gelatine, as now manufactured, may be considered as nearly as good as isinglass, for which its comparatively low price renders it a most acceptable substitute; it does not answer quite so well for the finer kinds of jellys, *Blanche-mange*, &c., but for all ordinary purposes it may be used. A jelly made from any animal substance containing gelatine, or sometimes a vegetable substance containing gum combined with acid, is termed *Gelatinia*.

Gelatio (Latin *gelu*, frost). Applied to *Frost-bite*, the effects of which are sometimes exhibited in horrible and fearful forms, such as the complete rotting away of the extremities, the loss of the nose, and other projecting parts. Those who travel to extreme northern latitudes not unfrequently suffer such disfigurements, and the chances are that, if once attacked and prostrated by the icy power they will not escape with their lives, for a usual consequence is *Gangrene* (which see).

In this country cases of Gelatio sometimes occur; we have known of several; one of them was a coachman, who, on one of the coldest days of the winter of 1855, was kept for five consecutive hours on his box, off which he had to be helped, being like one frozen stiff; his feet were so entirely devoid of feeling that he could hold them close to a fierce fire without experiencing any sensation of heat; this he very foolishly did, instead of applying friction and gradual warmth, and hence, perhaps, the sad result: his feet soon became entirely rotten and black; they dropped off piece by piece and left the ends of the bones, the tibia and fibula, quite bare. Another case occurred in the same year and was treated at the same hospital—Guy's. The patient had been employed shovelling away snow from a door step; he felt a little shivery, and his fingers were quite numbed, and after this he could get no life into them; they shortly became as black as charcoal, and dropped off one after another, and left only the stump with five ulcerous sores. Both these men were previously in a bad state of health, and there was consequently a want of vigour in the system for the necessary reaction; probably too the cases would have fared better if the proper remedial measures had been early applied. The first effort in all these cases should be to restore the circulation by friction with pounded ice or snow; by no means should heat be applied until there are symptoms of returning vitality to the part, and then it should be very gradual. The patient must have stimulants, hot Spirits and Water. Brandy is the best, and Ammonia (the Aromatic Spirits), about 30 drops in Peppermint Water; or, if Plain Water, with 20 drops of Tincture of Ginger. Warm bathing and swathing in flannels is also beneficial; but friction is the main thing to depend on. See *Gangrene*.

Gemellus (dim. of the Latin *geminus*, double). The name of two muscles of the thigh, situated below the *obdurator externus;* they are sometimes called *musculi gemini*. See *Thigh*.

Generation (Latin *genero*, to beget.) Reproduction of the kind or species. In the human race, as throughout the greater part of the animal kingdom, this is accomplished by *Fecundation*, or the effect of the vivifying fluid provided by one class of organs, upon the germ contained in the seed, or ovum, formed by another class, in the oposite sex. This germ when fecundated is termed the *embryo*. The process consists of *Impregnation* in the male, *Conception* in the female.

The organs of generation in the male are:—1. The *Testes* and their envelopes, viz. the *Scrotum* or cutaneous envelope, the *Dartos*, which corrugates or ridges the scrotum, and the Fibrous and Vaginal tunics;

we must also here include the *Epidermis*, above the testes, the *Vas deferens* or excretory duct, and the *Spermatic chord*; 2. *Vesiculæ seminales*, forming a canal situated beneath the bladder; 3. The *Prostrate Gland*, surrounding the neck of the bladder and the commencement of the urethra ; 4. *Cowper's Glands*, a pair situated below the prostrate; 5. The *Ejaculatory Ducts;* 6. The *Penis* (which see).

The Female organs are :=1. The *Vulva* or *Pubendum*, the external parts, comprehending the *Labia pubendi* (lip), the *Cliteris*, situated at the middle and superior part of the pubendum; the *Nymphæ* or *Alæ minores;* the *Urethra*, which terminates in the *Meatus urinarius*, opening into the *Vagina*, which is occupied by the *Hymen*, a semilunar fold, or the *Carunculæ myrtiformis*, its lacerated remains after the first act of copulation; and the entrance into the vagina, termed the *Os externum*, so called to distinguish it from the *Os internum*, or orifice of—2. The *Uterus*, whose appendages are—the *Ligamenta lata* (the broad ligaments, sometimes called *Alæ vespertilionum*, and the round ligaments commencing immediately before and below the *Fallopian tubes*, which extend to the *Ovaria*. We abstain from giving cuts of these several parts and organs for sufficiently obvious reasons; in a book intended for family use they would be altogether objectionable. With regard to the diseases which more immediately affect them, a few simple remarks will be made under their several heads; but we would here impress upon our readers the necessity of at once seeking medical advice for all affections of the genital organs. It is in the treatment of this peculiar class of diseases that advertising empirics reap their richest harvest, entailing the greatest present sufferings, and most fearful after consequences upon their too credulous dupes.

Geum Urbanum. The common Avens, or Herb Bennett, a plant of the natural order, *Rosaceæ;* possesses astringent, antiseptic, and tonic properties, and has been used as a substitute for cinchona in agues, a drachm of the Powder being given every two hours in the intermissions. For diarrhœas, dysenteries, and the latter stages of continued fevers, a wineglassful of the Infusion has been taken two or three times a day with good effect; it is made by pouring a pint of boiling water on ½ an ounce of the root.

The *Augsburgh Beer*, which is much prized on the Continent, is said to owe its peculiar excellence to the custom which prevails of putting a small bag of this plant into each cask.

Genio Glossus (Greek *genion*, the chin, and *glossa*, the tongue). A term applied to the muscles situated between the tongue and lower jaw. From the same root comes *Genio hyoides*, a muscle attached to the mental process of the jaw, and to the *os hyoides*. See *Jaw*.

Genista Tinctoria, (often called Small, or Petty Broom). A plant sometimes recommended for hydrophobia; given in the form of Decoction; it does not appear to be worthy of much confidence.

Genito-Crural. The name of a nerve proceeding from the first lumbar, and dividing into two branches, the internal and the external, the former of which accompanies the spermatic chord, and the latter is distributed into filaments of the crural arch. See *Organs of Generation*.

Ginseng. The *Panax Quinquefolium* of botanists. A plant so highly valued in China that no medicine is considered efficacious of which it does not form a part; in Europe, however, it is not much valued. Its properties appear to be tonic and antispasmodic. The general form of administration is a Decoction of the root.

GENTIAN (Latin, *Gentiana*). The dried root of the *Gentianis Lutea* is one of the most deservedly valued of our bitter vegetable tonics; it is especially useful in states of exhaustion from chronic disease, and all cases of debility of system, unconnected with excessive irritability of the stomach. It has also febrific, anthelmintic, and antiseptic properties, and as a warm stomachic tonic stands perhaps unrivalled. The forms in which it is exhibited are the Powdered Root, dose from 10 to 20 grains (this is sometimes sprinkled on foul sloughing ulcers): the Extract, 5 to 20 grains; the Infusion, made by macerating 2 drachms of the root, sliced or bruised, with a little dried Orange Peel, in a pint of boiling water for a couple of hours or so; dose, 1 to 2 ounces; Mixture, the same dose: Compound Tincture, 1 to 2 drachms: Wine, about 3 drachms. There is also a mixed substance called *Gentianina*, of which from 1 to 3 grains are given at the time. It is of this root that the publicans make their "Bitters," either by steeping it in brandy or other spirits, or by employing the Tincture to impart the needful bitterness to the spirits. By far the best preparation, however, is the Infusion, which may be made to keep any length of time in the following manner:—Take 4 ounces of sliced Gentian Root, and 1 ounce of dried Orange Peel, and pour upon them a quart of boiling water, let it stand about 3 hours, strain off the liquid, and pour in another quart of water, repeating this process three or four times, until the strength of the ingredients is exhausted; then put the whole of the strained infusions together in a saucepan, well lined or porcelained inside, and boil down to a single quart; to this add 2 ounces of Alcohol, which will coagulate the mucilaginous constituents of the Infusion, which may be separated by straining, so as to leave it perfectly clear; bottle and cork it tightly; when required for use add 1 teaspoonful to an ounce of water for a dose. The Concentrated Infusion may also be had of any chemist.

GEOFFROYA, a name given to the Cabbage Tree of Surinam—botanical name *Geoffroya inermis*, or *Surinamensis;* the bark of which is purgative, emetic, and acro-narcotic; it is only used to expel round worms, and for that purpose but seldom. The dose of the Powder is from 10 to 30 grains; of the Extract 3 grains; of the Decoction from ½ a drachm to 1½ for children; from ½ an ounce to an ounce for adults. (See cut next page).

GEORGIA BARK. The bark of the *Pinckneya pubescens*. An American plant, sometimes used as a substitute for Peruvian Bark or Cinchona.

Geranium (Greek *geranos*, a crane). The name of a genus of plants called by botanists Crane-bills, from the peculiar formation of their seed vessels. Every one is familiar with the cultivated varieties; but few, perhaps, are aware that some of the wild species are medicinal. The pretty little Herb Robert, whose slender red stalks, deeply-indented leaves, and pink flowers, may be seen so plentifully adorning our fields and waysides in the summer, has properties which render it useful in internal hæmorrhages. There is also another kind found wild in North America, and called *Geranium Maculatum* (spotted Geranium) whose root is called Alum-root, on account of its astringency.

Gerontoxon (Greek *gerontos*, an old man, and *toxon*, a bow). The opaque circle or semicircle which appears in the cornea of old persons: we generally call it *Arcus senilis.* See *Eye.*

Gestation (Latin *gestatio*, the act of bearing young in the womb). This is the state or condition of *Pregnancy* (which see). We speak of it as *gestatio uterina.* Besides the true kind, there are four kinds of erratic, or extra uterine gestion, viz.—1. The *abdominal*, in which the fœtus is lodged in the abdomen; 2. The *interstitial*, in which it is lodged among the interstitial elements of the uterus; 3. The *ovarial*, in which it is developed in the ovarium; 4. The *tubular*, in which it is lodged in the Fallopian tubes.

Giddiness, or *Dizziness*, in medical language, *Vertigo*, (which see). With this sensation many of our readers must be familiar; it is a confusion of intellect, which generally comes on suddenly, and a loss of power to balance the body: persons apparently in a good state of health sometimes experience it; and when they do so they may be sure that there is some internal derangement which ought to be attended to. A little aperient medicine will probably remedy the mischief, if it be not a symptom of organic disease, affecting the heart or brain, and causing disorder in the circulation. Giddiness is symptomatic of congestion of the brain, epilepsy, bilious derangements, all kinds of fevers, and debility of the system; it generally comes on previous to a fainting fit, or an attack of apoplexy, but may be a consequence of weakness merely, or of disordered circulation, from lying too long in horizontal positions. Its repeated occurrence should be viewed with alarm, and medical advice sought.

Gin, (*Geneva, or Hollands*). This is a spirit too well known, and extensively used in this country to need any description. Containing a considerable portion of Oil of Juniper, it acts medicinally as a diuretic: when tolerably pure, it is not unwholesome to those whose urinary organs require stimulating; but if they are already sufficiently active it is prejudicial. But how small a proportion of the spirit offered to the public really is what it professes to be! Gin, as commonly sold, is a vile compound of greatly diluted spirit, with Capsicums, or other pungent materials, to give it a fictitious strength; and Oil of Vitriol and Almond Oil, in due proportions, to give it body, and make it bead when poured out: perhaps, too, there may be a little Turpentine to make up for the deficiency of the more expensive Oil of Juniper. Properly it should be made of the spirit procured from Barley, or some other grain, and Juniper berries. How it is made, the great distillers, the spirit merchants and the publicans can alone tell. It first came into use as a diuretic, and then grew into favour as a cordial stimulant, and is now the bane of the lower classes of this country, among whom Gin drinking has increased to a fearful extent of late years, so that the judicious medical adviser is almost afraid to recommend it—even in cases where he knows it would be serviceable—lest the taking of it should grow into a habit, which might by-and-bye obtain the mastery. In all cases in which Gin would be serviceable, a diuretic medicine composed as follows would probably be more so:—Take of Oil of Juniper, 1 drachm; Sweet Spirits of Nitre, 2 drachms; Oil of Cloves, 6 drops; Simple Syrup, 1 ounce; Water sufficient to make 6 ounces; take 2 tablespoonsful when required. See *Diuretics*, *Fermented Liquors*, *Spirits*.

Ginckoic Acid. An acid discovered in the fruit of the *Gincka Biloba*. We are not aware of its having been applied to any useful purposes.

Ginger Root (Latin *Zingiberis radix*). The *Zingiber Officinalis*, belonging to the natural order *Zingiberaceæ*, is a plant found in the East and West Indies, possessing stimulant, carminative, and stomachic properties, which render it extremely valuable alike to the physician and the domestic economist. Its active constituents consist of a volatile oil and a soft acrid resin; its aromatic smell and burning flavour are well known. Combined with purgative medicines, it corrects their griping tendency, and it acts externally like mustard, as a rubefacient, even to the extent of raising a blister. In flatulency, colic, dyspepsia, and gout, it is given with manifest advantage; the dose of the Powder is from 10 to 30 grains, and, for either of the above disorders, it should be taken with 5 grains of Carbonate of Soda. Besides forming a subordinate ingredient in many other officinal preparations, it is the principal in those which bear its name, such as the Etherial Extract of Ginger—dose, from 1 to 2 grains; Tincture, from 1 to 2 drachms; Syrup, from 1 to 4 drachms: the latter is seldom or ever taken by itself, but used to sweeten and flavour medicines or beverages; a tablespoonful of it added to a a glass of Soda Water, is both pleasant and beneficial. The common drink called Ginger Beer is one of the most wholesome beverages which can be taken, if it is properly made, and not suffered to get stale; but much of that sold, especially at the low price of 1d. per bottle, is most unwholesome: good Ginger Beer cannot be made to sell at that price, and yield a profit to the vendor. Good receipts for the preparation of this beverage, and others into the composition of which Ginger enters, also for Gingerbread Cakes and Puddings, will be found in the *Practical Housewife*, a cheap manual of domestic utility, published by Messrs. Ward and Lock. We quote here, as immediately connected with our subject, the form for *Medicated Gingerbread Nuts*, in which disguise children may often be induced to take a required purgative without much trouble—3 drachms of Jalap, ½ pound of Flour, 5 ounces of Treacle, ½ ounce of moist Sugar, ¼ ounce of Ginger, 2 ounces of Butter, and the rind of a Lemon, cut small; mix, and divide into 30 nuts; bake, and keep in a canister in a dry place; give 1, 2, or 3, as may be required.

Ginglymus (Greek *gigglymos*, a hinge). An articulation of bones admitting of flexion and extension; commonly called a hinge-joint. See *Joints*.

GLABELLA (Latin *glaber*, smooth). The space between the eyebrows; hence we have, what was termed by Barclay, the *glabellar* aspect of the head.

GLAIRINE. This, according to some, is a gelatinous vegetable matter; it resembles the glaire or white of an egg. Some regard it as a kind of pseudo-organic substance, such as forms on the surface of mineral waters.

GLAND (Latin *glandula*, diminutive of *glans*, or *glandis* an acorn). "An organ of the body, in which secretion is carried on, and which consists of a congerie of blood-vessels, nerves, and absorbents." Thus it is that Brande describes these organs, of which Raspaile observes, that "some of them are *a kind of stomach*, whose province it is to elaborate in their cells *a substance tending to organize;* others are a kind of *bronchiæ* or *gills*, destined to purify the *fluids tending to organize.*"

Glands are variously designated,—

1st. From their forms—the *conglobate*, or simple, a nearly globular form, and subsisting by itself; the *conglomerate*, or compound, composed of various glands, as the salivary, parotid, pancreatic, &c.; the *concatenate*, linked together, so as to present the appearance of a chain, as the kind of knotty chord in the necks of children, extending from behind the ear to the collar bone.

2nd. From their functions, as the *lachrymal*, that which secretes the lachrymæ, or tears; these are of various forms, the *chylopoietic*, or chyle forming, such as the salivary, that is the parotid, the sub-maxillary, and the sublingual; the liver, and pancreas.

3rd. The *mucous* Glands, or Follicles, those which are seated in the course of the mucous membranes; those of the intestines are *clustered*, or *agminatæ*, and the *isolated*, or *solitaræ;* the first are sometimes termed *Peyer's*, after their discoverer, and the last *Brunner's*.

4th. The *sebaceous*, or *cutaneous* Glands; those of the skin. 5th. The *lymphatic;* and 6th, the *mesenteric*. These last are conglobate glands, situated respectively in the course of the lymphatics and lacteals.

Then there are the *Glands of Pacchioni*, a name given to certain granulations found in the superior longitudinal sinus of the membranes of the brain, and so called after their discoverer.

There are two primary divisions under which the glands are commonly placed; these are—1st, those employed in secreting some particular fluid for the use of the body, such as the *Liver*, which secretes bile, and purifies the blood; the *Kidneys*, which secrete urine; and the *Salivary Glands*, which secrete the saliva. 2nd—the *Absorbent Glands*, and vessels whose office is to carry off the waste materials of the machine. The *Pancreas* and the *Spleen* should also be placed in the first of these divisions, although their peculiar offices in the animal economy is somewhat obscure; (see the above several heads).

Glandular Swellings are not unfrequent, especially in weak and scrofulous persons; they often occur in the neck, and under the arm as well as elsewhere. Stimulant applications, and a general tonic course of treatment should be resorted to in such cases. Salt water bathing, and drinking mineral waters, are among the most efficacious remedies. If these cannot be obtained, let the patient take a mixture like this:—Sulphate of Iron, 12 grains; Sulphuric Acid (diluted), 1 drachm; Sulphate of Quinine, 24 grains; Tincture of Ginger, 2 drachms; Distilled Water, sufficient for 12 ounces: take a tablespoonful three times a day, with good nourishing food. If the bowels are at all confined, add to the mixture 6 drachms of Sulphate of Magnesia. Paint the swollen part with Tincture of Iodine every night.

GLANDERS (sometimes called *Farcy*). This is a malignant disease occurring in animals of the equine race, such as the horse, the ass, and the mule, which man is liable to contract; certainly by inoculation, perhaps, by simple contact with the skin. It is a horrible and loathsome disease, and very commonly proves fatal, and therefore no risk should be run; an animal affected by it should at once be killed, and the body buried. The chief symptom of its presence in the animal is inflammation of the lining membrane of the nostril, which becomes ulcerated, and emits a bloody, fœtid, sticky, yellowish discharge, should any of which come in contact with an abrasion on the skin of any person, or be even suffered to remain on sound skin, and, especially, if snorted into his eyes, mouth, or nostrils, it is almost sure to convey the disease. A week or two may probably ensue after this inoculation before it is manifested; then there will be febrile symptoms, probably vomiting and diarrhœa, indicating the presence of a poison in the system; small ulcerating tumours will form under the skin in various parts of the body, and the peculiar viscid discharge from the nostrils, which is the characteristic of the disease, will commence. No domestic treatment will be of service here; a surgeon should at once be consulted.

Glans Penis. The vascular body forming the apex of the *Penis* (which see).

Glass Gall. The saline scum which swims on the surface of molten glass when first made; it is sometimes used as an ingredient in tooth-powder, and is variously called *Sel de Verre*, *Fel Vitri*, and *Sandiver*.

Glass Maker's Soap. See *Manganese*.

Glauber's Salts, (Sulphate of Soda). A saline aperient and diuretic, much used before Epsom Salts came into vogue, and still employed to a certain extent; it is more nauseous than the later preparation, and apt to gripe; it is obtained by saturating Sulphuric Acid with Carbonate of Soda, and also by neutralizing any excess of acid which remains in the salt after the distillation of Muriatic Acid; it is sometimes found on the surface of the earth, and is a component of most mineral waters. The dose is from ½ an ounce to 12 drachms, dissolved in a considerable quantity of water.

Glauberite. Is a crystalized salt, consisting of the Sulphates of Lime and Soda in nearly equal proportions; they are both of them nearly anhydrous, that is, without watery particles. We are not aware that it has been applied to any medicinal purposes.

Glaucoma (Greek *glaukos*, azure). A name formerly given to Cataract of the Eye, on account of the greenish or grey opacity of the vitreous humour observable in that disease. See *Cataract*, *Eye*.

Glaucus (Greek *glaukos*, blue). From this root we have:—1. *Glaucic Acid*, an acid procured from the teazle and scabious, by treating the alcoholic tincture with ether, and the precipitate thence arising, first with subacetate of lead, and then with sulphuretted hydrogen, and lastly with heat: 2. *Glaucina*, a term applied by some to the natural form of small-pox, on account of the blueness of the vesicles; 3. *Glaucosis*, humoral opacity, called by the Greeks *Glaucoma*, and by the Romans *Glaucedo*.

Gleet (Saxon *glidan*, to run softly; old writers called it *glitt*). The transparent mucous discharge which frequently follows *Gonorrhœa*, (which see), also *Syphilis*.

Glenoid (Greek *glene* a cavity, and *eidos* likeness). The name of a part having a shallow cavity, as the socket of the shoulder joint; a fissure and foramen of the temporal bones; a ligament, &c.

Gliadine (Greek *glia*, glue). Vegetable Albumen; one of the constituents of *Gluten*, (which see), also *Zymome*.

Globules (diminutive of the Latin *globus*, a ball). The red globules constitute the colouring matter of the *Blood* (which see). In the practice of Homeopathy the infinitesimal doses of medicine are administered in the form of Globules, about as large as a pin's head. See *Homeopathy*.

Globus Histericus is that peculiar sensation, as of a ball rising in the throat, which is a characteristic of *Hysteria*, (which see).

Glomus or Glomeris (Greek for a clew of thread). A convoluted bundle of *Glands*, (which see). *Glomeration* is a term sometimes applied to a *Tumour*, (which see).

Glonoin, or *Nitro-glycerine*. Nitrate of Oxyde of Glycil is prepared by slowly dropping pure glycerine into a mixture of equal parts of strong nitric and sulphuric acids, stirring well after each addition. 3 fluid ounces of glycerine to 8 of nitric, and 8 of sulphuric acid, is a good proportion. The vessel should be surrounded with pounded ice, and any rise of temperature carefully avoided: after allowing the mixture to stand for some time, an oil will be found floating on the surface, which must be separated, and well washed with water by decantation. The oil should be then dissolved in a small quantity of ether, and the ether allowed to escape by spontaneous evaporation. The substance thus obtained is a heavy oil of an amber colour, very slightly soluble in water, but exceedingly so in ether. It has a sweet pungent aromatic taste, and when placed on the tongue, even in a very small quantity, produces headache, which lasts for several hours. When a small piece of blotting paper moistened with a few drops of it and placed on a smooth anvil is struck, with a hammer, a violent explosion is produced. If, on the contrary, a little of it in a piece of paper, is introduced into the flame of a candle, the combustion takes places quietly. When boiled with aqueous potash, Nitro-glycerine is decomposed, glycerine and nitrate of potash being formed; Mr. Squire, who gave the above account of this new preparation, says the word Glonoin gives no idea of the nature of this substance, and "Nitrate of Oxide of Glycil" is quite inadmissible; its proper name is, Nitro-glycerine.

Glossa or Glotta (Greek for the tongue). From this root we have the surgical terms *Glossitis*, inflammation of the tongue; *Glosso*, applied to the nerves, &c. of this organ, as *G. pharyngeal*, the ninth pair of nerves; *G. catochus* (Greek *katoko*, to hold down) an instrument for depressing the tongue; *G. cele*, (Greek *kele*, a tumour), an abscess of the tongue; *G. cornum*, (Greek *korneo*, to guard), a term formerly applied to a case for the tongue of the hautboy, and now sometimes to a long box or covering for a fractured leg.

Glottis. The aperture between the arytenoid cartilages, by which the air passes down into the trachea; it has a cartilaginous covering, termed the *Epiglottis* (which see); also, *Larynx* and *Tongue*.

Glue, or Gluten. The former is the commoner kind of *Gelatine*, (which see). The latter is the viscous substance obtained from wheaten flour; it is the azotised principle which exists in all kinds of grain, and corresponds to the fibrin of animal bodies; it is consequently highly nutritious: by decomposition, it may be divided into *Gliadine* (see opposite page) and *Zymome* (which also see). There is a vegetable milk, obtained by incision from the cow-tree of Caraccas, which is called *Glutinose*, or milky sap. *Glutine* is a principle which resembles Gluten, but it is insoluble in alcohol.

Glutæus (Greek *gloutos*, the buttock). Applied to three muscles of the hip, forming part of the buttock: they are the *maximus*, which extends up the thigh; the *medius*, which acts in the standing position, and the *minimus*, which assists the others. From the above root we have also the term *Glutæal* applied to the posterior iliac artery; to the lymphatics, on the course of that artery, and to a nerve distributed to the glutæic muscles.

Glycerine. This is an oily looking, almost colourless fluid, which has of late come very much into use as a therapeutic agent; it is a waste product of the fatty matters employed in the manufacture of candles, and in that of soap plaister. It does not readily evaporate at the ordinary temperature, and therefore forms a moist and pleasant covering for the skin, in many of its diseases; its healing as well as protective properties render it peculiarly applicable as a dressing for bruised or excoriated surfaces, to which it may be applied with a camel hair brush; where there is harshness, dryness, or a scurfy state of the skin, a lotion composed of Glycerine 1 part, to 15 parts of Plain, or Elder-flower water, is very serviceable. For chapped hands, cracked lips, &c. we can recommend the following Glycerine Paste:—First dissolve 1 drachm of Powdered Borax in 1 ounce of Rose Water, add to it ½ an ounce of Glycerine; melt 1 drachm of Spermaceti, in the same of Olive Oil, and 10 drachms of pure Lard; add the solution to the fat little by little, stirring all the time, and continuing to do so until nearly cold. In deafness and other affections of the ear, Glycerine has also been found serviceable; it has been applied to burns, mixed with poultices to keep them moist; and even administered in some cases of dysentery, both as a medicine and enema; the former being 12 drachms of Glycerine in six ounces of Orange Flower and Plain Water, equal parts; dose 2 tablespoonsful every hour; and the latter, Glycerine 1 ounce added to 5 ounces of Decoction of Bran, or Linseed, to be thrown up twice a day. If this article is pure it has scarcely any perceptible smell, and only a sweet mawkish taste; it can be obtained best at Price's Candle Works, London.

Glycine is an earth first discovered in analyzing beryl; it unites with acids to form salts.

Glycyrrhiza Radix (Greek *glykos* sweet, and *riza* a root). The root of the *Glycyrrhiza Galbia*, called by the Greeks *Adipson* (from *a* not, and *dipsa*, thirst) from its supposed property of quenching thirst; (see *Liquorice*), the saccharine matter or juice of which is termed *Glycyrrhizine*.

Goat's Rue, or *False Indigo*. A kind of leguminous plant belonging to the genus *Galega*, which is said to possess sudorific qualities, and to be an antidote to certain poisons, but we have no authentic records of cases in which it has proved successful.

Godfrey's Cordial. This is the common "sleeping stuff" which the poorer classes give to their children to keep them quiet, while the parents are out working or taking their pleasure: its extensive and indiscriminate use is the cause of much mischief; the objections which we have urged against Dalby's Carminative apply with much greater force to this compound. "Godfrey's" is prepared in various ways, but the following formula will pretty fairly represent what are its general constituent principles:—Boil in 8 gallons of Water 1 pound each of Caraway, Coriander, and Aniseeds, with 2 ounces of Ginger; while hot, mix 14 pounds of Treacle; and when a little cool, 2 pints of Laudanum, in which 2 ounces of Oil of Sassafras has been previously put. Let the whole stand, frequently shaking, for two or three weeks, then strain and make up to 8 gallons with Water. Were it not for the quantity of Opium which it contains, this would be a very good carminative; and as it is, may be a serviceable medicine properly and discreetly used.

Goitre, or Gotre (probably a corruption of *guttur*, the throat). The name given in

Switzerland to that enlargement of the thoroid gland, causing frightful swelling of the throat, which we call *Bronchocele*, or *Derbyshire Neck*, on account of its prevalence in the hilly parts of Derbyshire and some neighbouring counties. In the alpine districts of Europe, where it chiefly occurs, Goitre is frequently associated with *Cretinism*, a form of mental imbecility. In the warm, moist valleys lying between the elevated tracts it prevails most, being there undoubtedly endemic, produced by the action of some unknown agent upon the system; the malaria common to such places is probably a predisposing cause. Of the real cause of the disease but little appears certainly known; it more commonly affects women than men, and those of a lymphatic temperament. It is not of an inflammatory or malignant character, and the swelling which it causes is rather a deformity than an inconvenience, otherwise, there being seldom any pain or discolouration of the skin; occasionally, however, the tumour becomes so large as to cause serious mischief, by obstructing the voice, and respiration. In this country it seldom attains a very considerable size, although we have seen cases in which it was large enough to be extremely frightful and inconvenient, causing impeded respiration and apoplectic symptoms, arising from obstructions in the circulation of the vessels of the neck and head. As a rule, Goitre seldom attacks any below the age of puberty, but in countries where it most prevails children are sometimes affected by it, even from earliest infancy. Among the most probable causes assigned for it is drinking water impregnated with lime and magnesia. Its most successful remedy, by far, is Iodine, which those affected by it took in the form of Burnt Sponge, long before the existence of such a principle in marine productions was known. In this country, we commonly prescribe for it Iodine Ointment, to be rubbed into the tumour, or Tincture of Iodine, to be painted over it every night, intermitting the application when the skin becomes sore. We also give a mixture of Infusion of Gentian 1 ounce, with Iodide of Potassium 2 grains, with perhaps 10 drops of Compound Tincture of Iodine, twice a day, upon a full stomach. If taken in time, the swelling will generally yield to these means; but, if it be of long standing, large size, and at all indurated, it is very difficult of removal. In some of the places where the disease is endemic, a superstition prevails to the effect that a cure will be effected if the hand of a dead bachelor is rubbed over the tumour. We merely mention, but do not recommend, this mode of treatment, having faith rather in *Iodine* (which see).

GOLDEN OINTMENT. Commonly known as "Singleton's Eye Salve," is a compound of the Sulphuret of Arsenic (called Yellow Orpiment) and Spermaceti Ointment. It is a good application for the lids of inflamed and sore eyes, but not so good as the Ointment of Nitrate of Mercury, often termed Citron Ointment, which in appearance it closely resembles.

GOMPHOSIS (Greek *gomphos*, a peg). An articulation of bones which resembles the setting of a nail in a piece of wood, or the teeth in their sockets.

GONORRHŒA (Greek *gone*, semen, and *reo*, to flow). This term means literally involuntary emission of semen; but it is always applied to a discharge of purulent matter from the urethra or vagina. The common English term for the disease is *Clap*, derived from the old French word *Clapises* (places kept and inhabited by prostitutes); it is now commonly called in France a *Chaudepiesse*, from the heat and scalding in micturation: in Germany they term it *a Tripper*, that is, a dripping. Gonorrhœa may be shortly described as a morbid discharge from the urethra, in consequence of impure connection; it is, as Abernethy observes, "a mere local disease, not followed by any constitutional symptoms." Nay, it is decided to be a separate disease from the old *Lues*, or venereal disease, of which it has long been considered a modification. In this case the gonorrhœal poison falling upon a mucous surface produces from thence a discharge of infectious matter; in the other, the syphilitic poison applied to the skin, or, as it is believed, to any surface, produces ulceration and inflammation, forming a sore called *Chancre* (which see), the discharge from which, being received into the absorbent glands, occasions *Bubo* (which see), and being carried into the circulation, produces inflammation and ulceration in the throat, in the skin, the periosteum and the bones. (See *Syphilis*).

Symptoms.—Shortly after the infection has been communicated (it may be two or three days, or a week, or more), the patient experiences a sensation of heat, with tingling and uneasiness about the orifice of the urethra; this is quickly followed by swelling and redness about the margin of the opening, and a slight mucous discharge; then there is pain, and what is called *ardor urinæ*, or scalding of the water, and difficulty of passing, in consequence of the passage being clogged with mucus, which comes away with the urine in flocculi or threads. As the passage diminishes, in consequence of the swelling of the urethra, so does the stream, which is often divided into two or three, and attended with excessive pain; the discharge assumes a purulent appearance, and becomes yellow, with bloody streaks intermixed. By the colour and appearance of this matter, a judgement may be formed of the degree of inflammation in the urethra, down to the bulb of which it sometimes extends, although it is not attended with ulceration, except it may be in the *lacunæ*, or excretory ducts. It should be observed, that although the discharge has a purulent appearance, yet microscopic examination shows it to be chiefly mucous. It has been said, that Gonorrhœa will wear itself out; but the cure must not be left to nature, or it will probably wear out the patient first. Sir A. Cooper says he has "known it to continue for months, and continue to be infectious during all that time. It sometimes continues for so long a time, notwithstanding all the means which may be employed for its cure, as to be an opprobrium to our art." The same eminent authority continues—"There is no comparison as to the difficulty of getting rid of Syphilis and Gonorrhœa; Syphilis is a disease which a child might generally cure; Gonorrhœa is a disease which very often baffles the longest experience, and the greatest professional skill."

Both internally and externally the gonorrhœal inflammation often extends beyond its original seat; the glands of the groin became sympathetically affected—enlarged and painful;—this is nearly always the case with a first attack of Clap, which is more difficult to cure than any which may succeed it: unlike syphilis, in which but one gland on each side is affected, and in which there is generally suppuration, the several glands are all affected at once, and abscesses very rarely occur. The painful state of the parts termed *Chord e*, in which the penis is curved, or turned on one side, so as to prevent complete extension, is caused by the spreading of the inflammation to the *corpora spongiosum*. The next unpleasant effect of the disease is *Stricture* of the uretha (which see), and with, or close upon this, we often find an inflamed state of the muscles causing great irritation and spasmodic contraction. Sometimes the inflammation extends itself to the *vasa deferentia*, the excretory ducts of the testicles, and produces a swelling erroneously called *hernia humoralis*, from thence it spreads to the prostrate part of the uretha, causing great irritation in the neck of the bladder, so that the patient is under the necessity of pressing on the perineum when he makes water; and when matters have reached this pass, there is commonly swelling of the testicles.

Treatment. This is Sir A. Cooper's plan. In first Clap, begin with purgatives, Calomel and Colocynth pills—enough to act freely on the bowels, and liver, if necessary, but not to affect the system, this is not required in Gonorrhœa — with Salts and Senna, say 1 ounce of the former in 6 ounces of Infusion of the latter, a couple of tablespoonsful two or three times a day: after this, 2 drachms of Carbonate of Potash, or Sesqui-Carbonate of Soda, in a quart of some diluent drink (thin Mucilage of Acacia, with a little Lime Water, is perhaps the best to be taken), in the course of 24 hours. Soda-water is good, if it does not produce irritability of the bladder, resulting in a more frequent desire to void urine.

If the penis is suffered to hang for a considerable time in warm water, it will relieve the inflammation, and answer the same purpose as a warm bath. When *ardor urinæ* comes on, or the pain from chordee is severe, give the following mixture:—Extract of Conium, 1 scruple, rub down in 6 ounces of Camphor Mixture, and add 2 drachms of Liquor of Potash; take two tablespoonsful two or three times a-day. Pursue this plan for about a week, and then begin to apply to the mouth of the uretha a piece of lint dipped in Goulard Water; treat so for four days longer, after which, if the inflammation has greatly subsided, give this mixture:—Balsam of Copaiba and Mucilage of Acacia, of each 1 ounce, shake up well and add Camphor Mixture, 4 ounces: a tablespoonful morning and evening. When this mixture has been given a couple of days or so, and the discharge has considerably diminished, recourse may be had to an Injection composed of the Liquor of Diacetate of Lead diluted, with 6 grains of Sulphate of Zinc to 4 ounces; continue this and the Balsam until a cure is effected: should this not be speedy, it is better to vary the injection; try 6 grains of Sulphate of Copper in 12 ounces of Rose Water, or 1 grain of Bichloride of Mercury in 12 ounces of Distilled Water; the latter is rather an irritating injection, and should be the last tried.

In any attack of Clap, after the first, the Balsam may be at once given, and the Injection commenced at the end of the first week. Should the Gonorrhœal patient continue long uncured, bougies with injections had better be tried, they will increase the discharge at first, but will no doubt eventually effect a cure. Another means of curing Gonorrhœa, is to produce a change in the action of the uretha, by the employment of Cubebs, "which appears" says Sir A. Cooper, who greatly extols this remedy, "to produce a specific inflammation of its own, which has the effect of superseding the gonorrhœal inflammation." This Indian spice has of late been much employed in the treatment of the above disease, and with manifest advantage; it does not do to administer it at once in a first attack, where the inflammatory symptoms run high, especially if the patient be young and irritable; but after a week or ten days, or when the inflammation has somewhat subsided, it may be given, if by itself, in doses of from 1 to 2 drachms three times a day; it is best taken in milk. The following is a formula given by Sir A. Cooper for its combination with Balsam of Copaiba.—Cubebs 2 drachms, Balsam and Mucilage of Acacia, of each, 1 ounce, Camphor Mixture 4 ounces; take two tablespoonsful three times a day. Lawrence, in his lectures, says:—"Cubebs given at the commencement of the complaint will very frequently bring it to an end in a few days; and, in other cases, where it will not arrest the discharge, it will ease the pain. The longer the complaint has existed before the remedy is used, the less likely are you to put a stop to it by the employment of the pepper." Abernethy recommends that the treatment of Gonorrhœa shall consist chiefly of diluent drinks, gentle aperients, rest, low diet, warm baths, and frequent sponging of the parts. Do this—set the digestive organs right, and the running will stop of itself, when its proper time comes: much mischief, he thinks, is often done by the use of injections, bougies, &c., and so, undoubtedly, there is; but, much good also, when judiciously employed.

When Gonorrhœa is neglected, a confirmed Gleet is often the result, which is very difficult of cure, the discharge being intermittent, sometimes profuse, and at others, but a few drops now and then in straining at a costive motion or the like: there is some doubt as to whether this chronic gleety discharge is infectious; Sir A. Cooper holds that, if from a stricture, it is not, but if from an abscess in one of the *lacunæ* it is. There is generally little or no colour in it, but sometimes it becomes yellow, and under the effect of much excitement green, and even bloody; it may be rendered so, and purulent, by excesses of any kind. The medical treatment consists in the exhibition of the following medicines:—Sweet Spirits of Nitre 2 drachms, Balsam of Copaiba 1 drachm, Mucilage of Acacia 1 ounce, Camphor Mixture sufficient to make 6 ounces; take a tablespoonful two or three times a day; if this fails, let the following pills be taken:—Powder of Spanish Flies 3 grains, Chio Turpentine 1 drachm; mix and divide into 12 pills, take 1 three times a day. The local treatment consists in the use of bougies and injections; the best formula for the latter is Bichloride of Mercury ½ a grain, Distilled Water 6 ounces; after a time the strength may be doubled, but stronger than this it should not be used; if it does not succeed, a solution of Ammoniated Copper, or Sulphate of Copper, may be tried. Sea Bathing, rest and tranquillity, a tolerably generous diet, are among the most important remedial measures. Gleety discharge sometimes proceeds from a scrofulous or relaxed state of the system, and, in this case, Bark, Steel, and other tonics should be administered.

Female Gonorrhœa and *Gleet*, are not so decidedly affected by the specific medicines Copaiba or Cubebs, as they are in the opposite sex; a free use of diluents, and such lotions as the Diacetate of Lead to appease the local inflammation, will generally prove successful, if persevered in, and accompanied by rest, and gentle aperients; a sponge dipped in the lotion should be allowed to remain in the vagina, frequently cleansing and changing it. Female children, from a very early age up to that of puberty, have sometimes a purulent discharge from the pubendum, which may be thought gonorrhœal by those ignorant of their liability to it. Unpleasant suspicions, and even accusations may, as they have done, arise out of this; but a surgeon can at once assure the parents that they are unfounded. The proper treatment in this case is the administration of Calomel and Rhubarb, combined with a little Jalap, and the application of Black-wash to the inflamed parts.

Gonorrhœal Rheumatism. This sometimes follows an attack of the disease; whether it is the result of absorption of the poison, or of the irritation produced by the inflammation of the urethra and adjoining parts, is not clearly known; for this, Turpentine must be administered in some form, either in that of Balsam of Copaiba, Gum Olibanum, or the pure Spirit itself; (for the rest, see *Rheumatism.*)

Gonorrhœal Opthalmia is another form of the disease in which it attacks the eyes, and is very difficult to cure. The general treatment recommended for Gonorrhœa should, in this case, be followed with such local applications as may be required. (See *Opthalmia.*)

As it is of great importance that an injection should be applied so that it should come in contact with every part of the inflamed surface, we here append a few directions for its proper application. First take care that the syringe, be it of pewter or of glass (the latter is the best), works freely and easily with a slight pressure of the fingers. From 1½ drachms to 2 drachms of the liquid is the quantity required at once, and when the instrument is charged with this, insert the point carefully to the extent of about half an inch within the lips of the urethra, which should be gently pressed together so as to prevent the reflux of the fluid, which should be felt distending the passage as far down as the membraneous portion. When the syringe is emptied, withdraw the point, and keep the orifice of the urethra pressed together, as above directed, for two minutes or more; then withdraw the pressure, and the liquid will flow out, most likely with considerable force, in consequence of the elasticity of the canal, which it is advisable to clear by making water before using the injection; and this reminds us of a popular notion that mischief may be done by the injection reaching the bladder, but this is an idle fear with the charge which an ordinary syringe can convey. An injection should never be so strong as to cause much smarting or pain in the passage, only a sense of titillation; it is best to begin with it very weak, and gradually increase its strength: swelled testicles and sympathetic buboes are by some attributed to the use of astringent injections, but we have known these occur when no injections have been used.

GOOSE. The flesh of this well-known bird, a member of the genus *Anser*, is far too rich for weak stomachs, and all invalids should eschew it as a poison; but a strong, healthy person may take it in moderation, without the probability of any ill effects. It should be always roasted, as by this means some of the fat is got rid of.

GOOSEBERRY. The fruit of the *Ribes Grossularia*, which is too well known to need any description; it is wholesome in all its varieties, especially when perfectly ripe, and makes one of the most agreeable and useful of jams. We would not, however, recommend much of this to be taken, on account of the skins, which form a considerable proportion of it. Green Gooseberries in a pudding or pie are by no means unwholesome, if well sweetened; but the ripe berries are best, and especially for persons of constipated habits, because they are slightly laxative. See *Fruit.*

GOOSE GREASE (Latin *Adeps Anserinus*). The fat of the Goose melted down and strained was formerly used as an emollient in enemati, and also given as a mild emetic; it is now chiefly employed as a healing application for chapped hands, &c. See *Adeps.*

GORDIUS. The *Seta Equina*, or Horsehair Worm of the old writers. It was supposed that the peasantry of Lapland and some other countries, by drinking water in which this worm existed, acquired intestinal and cuticular diseases: the latter, in which the worm was said to be lodged under the skin, was the *Morbus pilaris* of Horst, and the *Malis à crinonibus* of Sauvages. See *Worms.*

GORGET. An instrument used for cutting the prostrate gland and neck of the bladder, in *Lithotomy* (which see).

GOULARD'S CERATE. The Compound Cerate of Lead, or the *Ceratum Plumbi Compositum* of the London Pharmacopœia; it is cooling, astringent, and deobstruent; a good application to burns, excoriations, and inflamed sores.

GOULARD'S EXTRACT. A saturated Solution of the Subacetate of Lead, the *Liquor Plumbi Diacetas* of the London Pharmacopœia; in old medical books it is frequently called Extract of Saturn. It is, externally, cooling, astringent, and discutient; diluted with 40 times its quantity of Distilled Water it is a good application to burns and inflamed surfaces; still more diluted it makes a good collyrium. In either way it is commonly called Goulard Water. See *Collyrium*, *Lotions*.

Goulard's Ointment is prepared by melting together 4 ounces of White Wax and 9 ounces of Olive Oil, then stirring in, while hot, 1½ ounces of Goulard's Extract, and 1 drachm of Powdered Camphor.

Gourds. The edible Gourds may be considered as wholesome vegetables generally; the best are the Cheese Gourds and Vegetable Marrows. They are agreeable to the palate of most persons, when boiled, and served up with a little butter, but are more wholesome without the latter; nor do they require it, if taken with the gravy of roast meat: if eaten perfectly ripe, and the rind rejected, they are, perhaps, more easy of digestion than Cabbage, and thence are more suitable for invalids. See *Pumpkins*.

Gout (Latin *gutta*, a drop, or defluxion). This is a disease of the blood, the exact nature of which does not appear to be clearly understood: all that we certainly know is, that the blood of a gouty person contains an excess of uric acid; and this excess is by some thought to be a cause, by others a consequence of the malady, The proper outlet for this acid is through the bladder, in the urine, where it may generally be found, in certain proportions; but in some peculiar conditions of the constitution the quantity is greatly increased, and then it constitutes the disease called *Gravel* (which see). This latter disease often alternates with Gout in the same person, or in different individuals of the same family—in this case the males being usually affected by Gout, and the females by Gravel. There is, perhaps, no disease in which hereditary tendency is so clearly established as in this. A gouty father will, it is quite likely, have a gouty son or grandson, although it will sometimes intermit for two or three generations. Persons of full habit are most likely to be attacked by Gout, the premonitory symptoms of which are dull pain in the side, headache, confined bowels, high-coloured urine, and sometimes scaly eruptions on the skin. The attack itself commonly comes on in the night: the sleeper probably goes to bed with a sort of undefined dread; his slumber is uneasy, and disturbed by dreams, which are suggestive of some great peril or suffering; he is awakened to the reality of the latter by a sharp twinge in the foot, most likely in the ball of the great toe. Watson, in his "Lectures," quotes, from a French author, this quaint and forcible description of the severe pain:—"Place your joint in a vice, and screw the vice up until you can endure it no longer—this may represent rheumatism; then give the instrument another twist, and you will obtain a notion of Gout." The pain is, indeed, most excruciating, and those who have once experienced it, dread its recurrence, which, however, seems inevitable at periods more or less distant. Within twenty-four hours after the commencement of the attack, the part—which feels as if it had been crushed, burnt, or dreadfully lacerated, so that it shrinks from the slightest touch, even of the bed-clothes—begins to swell, becomes red, and is covered with moisture; then, it is likely that the patient, relieved somewhat of his pain, falls asleep, and gets into a gentle perspiration. He awakes refreshed, but the foot is extremely tender, and, if he is able to walk on it, there is a constant dread of its being touched. For some days and nights the paroxysms continue to come on, although with less severity than at first; then the swelling abates, and the skin, which has become very red and shiny, peels off with a troublesome itching, the foot resumes its usual appearance, and the patient feels as well, or even better than ever. So commonly is this latter the case, as to give rise to an erroneous impression that an attack of Gout improves the health, rather than otherwise, and hence the indulgences which tend to bring it on are oftentimes not avoided, as they would other wise be. Sometimes months, and sometimes years will elapse before another visitation of this troublesome disease occurs. The succeeding attacks will probably be less severe than the first, but there will be more constitutional derangement, and the intervals between them will become shorter and shorter, until at length the patient is scarcely free from the disease, except, perhaps, during the summer months. Both feet will become affected, either alternately or together, and eventually almost every joint of the body, around which chalky concretions are formed, rendering them weak and inflexible. Watson says that "The material of these curious concretions (called chalk stones) is deposited at first in a half fluid state, and resembles soft mortar; but the more watery ingredients being afterwards absorbed, it becomes dry and hard." It is related, in a medical communication, of a gouty individual, "that he was accustomed, when playing at cards, to chalk and score the games upon the table with his gouty knuckles." When these depositions do not confine themselves to the joints, they often appear in various parts of the body as bumps or tumours, which cause transient local inflammations, and run their course in a few hours, being accompanied by shooting pains, and a disposition to grind the teeth. Graves, in his clinical lectures, says that "these seem to be the result of momentary congestions." When Gout attacks the stomach it is very dangerous; its symptoms in this case are great pain, nausea, vomiting, and eructations and flatulency; there are also violent cramps of the organ, and of the limbs, with great depression of spirits, at times diarrhœa, but more frequently obstinate constipation.

When Gout affects the chest, there is palpitation of the heart, with difficulty of breathing, and a countenance indicative of distress. When the head is the seat of disorder, there is giddiness, with pain and apoplectic symptoms. When the spine is affected, severe neuralgic pains, with affections of the kidneys and, subsequently, perhaps palsy.

When, commencing with a joint in the ordinary way, it suddenly leaves that part before reaching its maximum of intensity, and attacks some internal organ, we have what is called Retrocedent Gout. "It occasionally in this way," says Watson, "attacks the urethra, simulating gonorrhœa, at other times the eye, the testicle, and now and then, to a dangerous extent, the throat."

Foremost, among the *causes* of Gout, stands hereditary predisposition; next to this is luxurious living, large quantities of animal food, rich sauces and wines, with little bodily exercise; or there may be much of this with copious perspirations, and a great consumption of porter. Stalwart burly coal-heavers and brewers' labourers, are sometimes gouty; and so are thin spare men of sedentary habits, who are subject to indigestion and constipated bowels; it is sometimes brought on by great anxiety of mind or mental toil, great bodily fatigue, sensual indulgences, or suppression of customary discharges, such as piles, to which gouty persons are very liable.

Gout more commonly attacks males than females, and most frequently those between the ages of thirty and forty years, although in some, who have it by inheritance, the predisposition is so strong that it shows itself at a much earlier age.

Gout and Rheumatism, in some points, resemble each other, but the former may be distinguished from the latter by its generally attacking but one joint at the time, and by its being usually confined to the smaller joints; by its previous or accompanying indigestion, and by the absence of the sour perspiration, that being a characteristic of *Rheumatism* (which see).

Buchan says, that "excess and idleness are the true sources from which it originally sprung, and all who would avoid it must be active and temperate." A strictly abstemious diet, therefore, is advisable for those who are, from hereditary or other causes, predisposed to Gout. Malt liquor by such should never be taken; Wine, if at all, very moderately; strong Coffee should be avoided, and highly seasoned Meats and stimulating drinks. Milk or Oatmeal Porridge for breakfast; meat once a day only, for dinner, with fresh vegetables and bread; rice or sago puddings; no pie crust should be allowed. A little spirits and water may not do harm, but then again it may; therefore it had better not be taken. Early hours, sponging, or the shower bath, with plenty of friction; regular and moderate exercise; these are the best preventive means. We never see agricultural labourers gouty, and Dr. Watson has well observed.—"Let the son of a rich and gouty nobleman change places with the son of a farm servant, and earn his temperate meal by the early sweat of his brow, and the chances of his having a fit of the gout will be very small."

Treatment. As this disease is of an inflammatory nature, it requires active antiphlogistic treatment: bleeding was formerly much resorted to, but is not often practised now; Saline purgatives, with Mercurials, and a spare diet, being generally sufficient. From 3 to 5 grains of Calomel, followed by a Black draught, to be repeated every four hours or so, until the bowels are freely opened, should be first given; after that a Saline Mixture with Colchicum, which last is the grand specific in Gout, frequently effecting a cure in a manner almost marvellous, although how it acts is by no means clear. Watson says that "it sensibly modifies the condition of the urine, rendering it less acid, and even alkaline, and increasing its quantity." He presumes that "these effects are produced by certain changes wrought in the blood by this substance, which thus and there proves, *somehow*, an antidote for the poison of gout." This remedy should, however, be judiciously employed, and always, if possible, under medical direction. (See *Colchicum.*)

The following combination may be recommended for the administration of this remedy:—Take of Wine of Colchicum 1 drachm, Bicarbonate of Potash ½ a drachm, Simple Syrup 2 drachms, Solution of Acetate of Ammonia 2 ounces, Peppermint Water, sufficient for an 8 ounce mixture. Dose, 2 tablespoonsful every 4 hours.

In the treatment of this disease, care should be taken that all the excretory organs are in proper operation; as the imperfect action of one or other of these will frequently render all curative efforts useless, and keep up the morbid condition of the blood, from which the disease proceeds, and which is the result of faulty assimilation. Thus, when there are gouty symptoms, unattended by fever, it has been found that Bark and Hydrochlorate of Ammonia, which have the effect of promoting an increased flow of all the secretions, acted most beneficially. So, too, when the system is low and deficient in vital energy, it is necessary to administer tonics, such as Bark, Quinine, Sarsaparilla, or some preparation of Steel, with, perhaps, Cod-liver Oil, before resorting to Colchicum or Guaiacum, which appear to exert a specific influence on Gout.

Sometimes what are taken for gouty pains are merely those of neuralgia, and, in this case, much mischief may be done by the incautious use of Mercury and Colchicum. Sometimes the pains and swellings of a gonorrhœal taint so closely similate those of this disease, that it is difficult to make a distinction. Hence, we see, how necessary it is, that the skill and experience of the medical practitioner should be brought to bear upon cases of this kind. This, however, is not always to be obtained, and when it cannot the foregoing and following simple directions may be useful.

We will suppose then, that the Calomel and Saline Purgatives have been duly administered, and have had their full effect, and that the Colchicum Mixture has been likewise given, with, if the nights are restless, a 10 grain Dover's Powder at bed time, combining with it 2 or 3 grains of Calomel, if the motions are dark and offensive. If there is much thirst, effervescing draughts composed of Bicarbonate of Potash 1 scruple, Citric Acid 15 grains, with a little Syrup of Ginger, may be given occasionally; 15 grains of Carbonate of Magnesia added to each draught, will render its operation more effective, if not disagreeable to the patient. The action of the bowels must be kept up bya draught composed of Infusion of Senna with Decoction of Aloes, of each ½ an ounce, if required; there should be a copious motion at least once a day. Very commonly the local inflammation will subside with the constitutional symptoms; but, whether it does so or not, considerable relief may be afforded by the application of Spirit Lotions combined with an anodyne in some such form as this: Spirits of Wine 2 ounces, Tincture of Opium 2 drachms, Water 10 ounces; rags wet with this, to be kept constantly applied, or the foot to be covered with Cotton, Wool, or Wadding, and over the whole put Oiled Silk.

As to diet: give light broths, farinaceous puddings, plenty of mild diluents, with effervescing draughts, and a teaspoonful of Brandy; or, ½ a drachm of Aromatic Spirit of Ammonia, for the more feeble patients.

Dr. Belli states in the *Gazzetta Medica di Toscana* "that he has for many years succeeded in curing Gout in the following manner. He gives for two or three days every fortnight, at the first symptoms of a fit, a purgative compound of from 8 to 10 drachms of Epsom Salts, 24 grains of Nitrate of Potash, and about 1½ grains of Sulphate of Iron; the whole dissolved in 1½ pints of Water: with weak subjects the purgative is given only every other day. The fourth part of the whole solution is given every successive half hour, with a few cups of light Broth, or an infusion of *Althœa Officinalis* (Mallow), or Camomile Tea. An excellent adjunct to this method is the juice of the wild Chicory, of which 3 ounces should be taken every morning, fasting, during the greater part of the year, or the whole twelve months. A Decoction of the root of the same plant may be substituted, and either should be sweetened with an ounce of Wild Strawberry Syrup.

When the local disorder does not yield to the general treatment, but continues to exhibit aggravated symptoms, recourse must be bad to leeches, of which a dozen or two may be applied, and after them if the swelling be indolent, a blister, or friction with stimulating and anodyne Linament like this:—Soap Linament 1 ounce, rubbed down with Extract of Aconite ½ a drachm, and then added to Spirits of Turpentine 1 ounce; dry friction should also be employed—rubbing with the palm of the hand and Hair Powder. When there is no longer inflammation of the parts, the limb should be exercised, at first very gently, to restore the circulation and prevent morbid deposits. When the deceased action has continued for some time and these deposits have taken place, so as to produce structural changes, the restoration, if it takes place, will be very slow and gradual; a perseverance in the course above recommended will be the most likely method of effecting a partial, if not a complete cure.

If the constitution of the patient be much broken and debilitated, a very active course of treatment must not be attempted, and a cure is almost out of the question; a mitigation of the patient's sufferings is all that can be effected in such a case; there must be no great reduction in the diet, only avoid stimulants and indigestible food; if aperients are given, they should be of a warm and cordial character such as this:—1 drachm each of Magnesia and Rhubarb, 20 minims of Wine of Colchicum, 40 of Aromatic Spirit of Ammonia, Water, 6 ounces; take a fourth part twice a day. Or, if the aperient be saline, let it be accompanied by Spirits of Ammonia and Peppermint Water; wrap the affected part in warm moist flannel; take perfect rest of body and mind if possible.

When the Gout is retrocedent, which is sometimes caused by active local treatment, accompanied by the application of cold lotions, (those for this disease should always be used with the chill off), and which is evidenced by pain, and other signs of disorder in the stomach, the above draughts may be given, with 10 drops Laudanum, added to each dose; should faintness accompany the attack, as is often the case, a little Brandy may be administered, provided there is no tenderness at the pit of the stomach indicative of inflammation; the feet also should be immersed in a mustard bath, or have a mustard plaster applied to them.

It is maintained by some that Gout, Rheumatic Gout, and Rheumatism, are but three forms of the same disease; but it appears they are referable to different kinds of mal-assimilation, and the consequent formation of different poisons in the blood, the absence or presence in which of the uric or lithic acid has been taken as a distinctive mark of the disease: thus in true Gout we find it plentifully, in Rheumatic Gout little or none, and none at all in simple *Rheumatism* (which see). The more obvious distinctions, however, between Gout and Rheumatism are in the previous symptoms; in the seat of pain, and mode of attack; in the age of the patient; and in the presence or absence of the inflammatory fever, with which Gout nearly always commences. In this disease, too, there is more or less of dyspepsia, previous to, and at the time of commencement; the pain is more violent and paroxysmal, and, as we before observed, the larger joints are principally attacked by it.

Cullen enumerates four species of Gout—the Regular, the Atonic, the Misplaced, and the Retrocedent, with the peculiarities of which we need not trouble our readers; but may briefly say, in addition to the directions for treatment already given, that when it attacks the head, so as to threaten apoplexy or palsy, a large blister should be applied to the back of the neck, small ones to the inside of the legs, and cataplasms to the soles of the feet; give Carbonate of Potash with Ether, and aromatics; and Tincture or Decoction of Aloes, as a purgative. When it attacks the lungs, and produces Asthma, apply blisters to the breast or back, stimulating cataplasms to the soles of the feet, and administer opiates and antispasmodics.

It has been observed that the painful paroxysms of Gout are short in proportion to their intensity; and thus the longer the intermission, the more effectual are they in removing various anomalous diseases to which the patient had been previously subject. Where there is youth, and an unimpaired constitution, we may hope to effect a cure; but the unfavourable prognostics are an impaired constitution, diseased viscera, hereditary predisposition, the deposition of calcareous matter in the joints, and the sudden retrocession of the disease from the extremities to some internal organ, as the brain, heart, lungs, or stomach.

We find what is called *Atonic*, or *Low Gout*, chiefly in those who have been long subject to the gouty diathesis, and whose strength has been much reduced by the Colchicum and other powerful medicines which, in the acute stages of the disease, they have been obliged to take. In this, although the local affection is nearly as painful and severe as in the inflammatory form, yet the paroxysms are unaccompanied by fever; in this, also, there is no chalk deposit, nor red sediment in the urine. The case should be considered one of congestion, simply, and treated as such. Where there is great weakness of the stomach, Mineral Waters, especially those of Bath, will be found beneficial; but, although formerly much resorted to by all gouty persons, they cannot be recommended to full habits and inflammatory states of the constitution.

None must expect to cure Gout in a hasty manner, with a little rubbing and a few doses of medicine. Hear what the old physician, Sydenham, says on this head:—"This is primarily and chiefly to be attended to—namely, that all stomachic and digestive remedies, whether they consist of a course of medicines, regimen, or exercise, are not to be entered upon in a heedless manner, but must be persisted in daily, and with great exactness. For since the cause in this and other chronic distempers is become habitual, and in a manner changed into 'second nature', it cannot reasonably be imagined that the cure can be accomplished by some slight and momentary change made in the blood and juices by any kind of medicine or regimen; but the whole constitution is to be altered, and the body to be in a manner formed anew."

Gouty Concretions are the depositions formed in the joints of gouty persons, consisting of Urate of Soda and Phosphate of Lime. (See *Calculus*, *Chalk Stones*).

As the diseases proceeding from calcareous deposits in the bladder, or other tissues, appear to be peculiar to the human race, it has been thought by Wollaston and others that they might be ascribed to the cooked animal food, and fermented liquors, taken by man. If this theory is correct, both the vegetarian and temperance advocates have a strong argument in favour of their views.

Gowland's Lotion. This is a Solution of Corrosive Sublimate in Emulsion of Bitter Almonds; it has the appearance of milk, and has long enjoyed a great reputation among *Cosmetics* (which see).

Gracilis (Latin for slender). The name of a long thin muscle of the interior of the thigh; or, as we should say, of the internal femoral region.

Grains. These are the seeds of plants belonging to the order of grasses; we sometimes term them "cereals." From them the whole human family derive their chief nutriment, and they are, in their constituents, the nearest approach to animal food which can be found in the vegetable kingdom; in them the mineral elements of the soil, and the gases of the atmosphere, are so proportioned and combined, as to present to the digestive and assimilative organs the materials best fitted to support the bodily functions, and afford nourishment to the tissues. This nourishment, which the various grains afford to animal bodies, may be classed under three heads; in the first we find the azotized principle, adapted to build up and supply the waste of the muscular, or fibrous and albuminous tissues, (see *Gluten*); in the second we have the non-azotized principle, which supplies respiratory food, forms fat, &c. (see *Starch*); and in the third the mineral principle, consisting chiefly of phosphates of the alkalies and earths, which goes to form the bones, the nerves, and the tissues generally. Of course, the nutrient properties of the different kinds of grain depends greatly upon the quantity and proportion of each of their constituent principles. See *Barley*, *Maize*, *Millet*, *Oats*, *Rice*, *Rye*, *Wheat*, &c., which are the chief grains in use.

Grains of Paradise, or Guinea Grains. The seeds of the *Amomum Granum Paradisæ*, belonging to a genus of plants all of which bear aromatic seeds; among them are found *Cardamoms* and *Millagetic Pepper*

These grains are stimulant and aromatic, and have been given in large doses for ague; they are also used to give a false strength to Beer, Wine, and other liquors. See *Amomum*.

Graines d'Avignon. The fruit of the *Rhamnus Infectorius*, and other species of Buckthorn, commonly known as French Berries; they have aperient properties, but are not now much used. See *Buckthorn*.

Grana Molucca. An old name for the seeds of the Croton Tiglii, from which the drastic oil is extracted. See *Croton Oil*.

Granate Cortex. (See *Pomegranate*.)

Grand Couvre-Chef. A French surgical term, applied to a handkerchief used as a bandage. See *Bandages*.

Grandines (plural of the Latin *grando*, a hail stone). Applied by Wesser to enlarged *Tubercles* (which see).

Granulation (Latin *granum*, a grain). This term is applied to the process by which metallic substances are converted into grains or coarse powder. In surgery, which more nearly concerns us, the little grain-like pieces of flesh which form on the surfaces of ulcers and suppurating wounds, and serve to fill them up, and so advance the healing process, are termed *Granulations.* This process is sometimes called *Granation*, or *Incarnation.* In weak and unhealthy states of the system, healing by Granulation does not proceed so rapidly as otherwise, and the sore remains depressed and smooth, with a shiny appearance; but sometimes the Granulations are excessive, and then we have what is called *Proud Flesh* (which see), also *Ulcers*, *Wounds.*

Grapes. Most persons are fond of this delicious fruit, and there are few with whom it disagrees: to those suffering from the thirst attendant on fever it is most grateful and pleasant, and may be safely recommended, with the proviso that they swallow not the skins: it is better also to reject the stones, if many Grapes are taken: a few will do no harm. See *Fruit.*

Gravedo (Latin *gravis*, heavy). A cataract or cold, accompanied by a sense of heaviness in the head.

Gratiola Officinalis (Latin *gratia*, gracious, or giving). The Hedge Hyssop, so called on account of the virtues formerly ascribed to the plant, which belongs to the natural order *Labiateæ.* See *Hyssop.*

Gravel (Latin *gravis*, heavy). Crystalline sediments deposited in the bladder from the urine; when amorphous, that is, shapeless, irregular, and reducible to powder, they may be either red or pink, consisting chiefly of Lithate of Ammonia; or white, into the composition of which the Phosphates largely enter. When crystallized, they may be also red, or white, the former consisting of crystals of Uric or Lithic Acid, and the latter of Triple Phosphate of Ammonia and Magnesia. Although the deposits in Gravel vary considerably in their form and colour, and to some extent in their character also; yet the nature of the disease is essentially the same. If the deposited particles remain stationary in the bladder for a length of time, others gather around them until they form a hard solid mass, which has to be broken down or crushed before it can be removed, and this constitutes the operation of *Lithotomy* (which see).

The *symptoms* of an attack of Gravel are constipated bowels, restlessness, and dry skin, with pains in the loins, commonly on one side, where it descends, following the course of the urethra; the thigh and leg feel numbed; and sometimes in the male the testicles are drawn up. There is frequently sickness, and an urgent desire to make water, which is passed with difficulty, and is high-coloured and turbid, depositing a sandy powder, which is sometimes red, at others white, or a mixture or alternation of the two colours, with occasionally a bloody tinge. Derangement of the digestive organs is common in such a case; there will probably be constipated bowels, with acid eructations with great restlessness, and a sense of weight at the pit of the stomach.

Constitution Water is a remedy in the treatment of Uric acid gravel which has obtained some celebrity of late; it is sold at 5s. 2d. per bottle, of which an eighth part is directed to be taken four times a day; this quantity contains about 3 drachms of Carbonate of Potash, to the presence of which it owes its efficacy. It is recommended in all cases of stranguary, gravel, and stone; but, says Dr. Hassall, "the only cases to which it is really applicable, are those of Uric acid diathesis: in some forms of urinary deposit it would be productive of incalculable mischief."

GRAVE-YARDS. As a matter closely connected with sanitation, or the laws of health, it behoves us to say a few words upon this subject here. Until quite recently, the Graveyards of our populous towns and cities were a disgrace to a civilised community, and frequent sources of pestilence and death; over-crowded and closely surrounded by houses as they were, and, in too many cases, still are, it cannot be otherwise; the mass of decomposed animal matter lying in many instances so near to the surface, must give out noxious gases, which are breathed by those surrounding the locality, of course to the great detriment of their health. Graveyards should, in all cases, be removed a considerable distance from human habitations; a light sandy or chalky soil is best for them, and the corpses should be at least six feet below the surface; they should also be in an elevated spot, so that the winds may sweep over them and bear away all noxious effluvia.

GRECIAN WATER. A solution of Nitrate of Silver used for dyeing the hair black: exposure to the air soon turns it purple.

GREEN SICKNESS. The popular name for *Chlorosis* (which see). It has obtained this name from the pale and greenish cast of the skin of the patient; it is one of the forms of *Anœmia* (which see), and chiefly affects young girls, although adult and even married women, and young delicate males are subject to it. In addition to the pallor of the skin, which is common to all the forms of anæmia, this has some peculiar symptoms, such as hysterical paroxysms, and extreme nervousness, pain in the side, swelling of the ankles, headache recurring at certain periods; there is also frequently depraved appetite, and a disinclination for wholesome food altogether. If the case is long neglected the symptoms become greatly exaggerated, the secretions are unhealthy in character and deficient in quantity; the limbs swell, the pains in the head and face are more severe, and so weak is the patient that every exertion, even the slightest, is laborious; the depraved appetite becomes more remarkable, cinders, chalk, slate pencil, and articles equally unfit for eating, are sought for, and masticated with avidity. The disease appears to arise from a defect in the blood of the red particles, and other solid constituents, and this is caused by defective assimilation; those young persons of sedentary habits, or who work in crowded factories, who live in underground kitchens, and the like, are particularly subject to it, especially domestic servants, and others, who change a life of open air activity in the country for one of close confinement in a town. Change of air, tonics, and the course of treatment prescribed under the head of *Anœmia*, is the best in such cases. Exercise, fresh air, and nourishing diet, are the grand restoratives. Iron is the best tonic, alone or in combination with Quinine; it should be given in the least nauseous form, and at least one hour before meals.

GREGORY'S POWDER. So called from Dr. Gregory who first used it, consists of Rhubarb, Calcined Magnesia, and Ginger, in the proportion of 2 parts of the first, 4 of the second, and 1 of the third. It is an excellent stomachic and mild aperient, and may be taken occasionally by both adults and children with great advantage; but it should not be taken often and regularly, as the quantity of magnesia will be likely to irritate the coats of the stomach, and bring on diarrhœa and dysentery. Gregory's Powder may be taken either in simple water, or with a few drops of Sal Volatile, which will increase its stimulant and tonic properties.

GREY LOTION. A preparation for irritable sores, consisting of Submuriate of Mercury and Lime Water.

GROATS. The decorticated seeds of the *Avena Sativa*. See *Gruel*, *Oats*.

GROCER'S ITCH. A variety of the disease known as *Eczema* (which see); it is distinguished by the generic term *impetiginodes*, and is produced by the irritation of sugar on the skin: frequent ablutions, with the use of mild saline aperients will prove the most effectual remedies; if there is much inflammation and itching, fomentation with warm gruel or milk, and warm bran poultices will be of service.

Gromwell. The *Lithosperma Officinale*, a plant of the natural order *Boragineæ*, found in this country, and formerly much esteemed as a remedy in calculous disorders.

Two other species of the genus *Lithospermum* are indigenous to this country; the *L. Arvensis* or Bastard Alkanet being the most common; but neither of them have now any medical reputation.

Grosaline (*grosalæ*, a goosberry). The name given by Guibourt to the peculiar principle extracted from gooseberry and other acid fruits, forming the basis of jelly.

Groundsel. The botanical name of this common wayside plant is *Senecio Vulgaris;* it belongs to the natural order *Compositæ*, and the generic name of its tribe is derived from the Latin *senex*, age, on account of the silvery hair-like filaments with which the seeds are surrounded. Groundsel now chiefly used as a food for birds, was formerly much employed in cataplasms, from an idea that it was good for sickness of the stomach. A weak Infusion of the plant is still sometimes given as a purgative, and a strong Infusion as an emetic; it is also chopped up and given to horses to free them from botts, and the flowers are said to be cooling for song birds.

Growth. The act of growing or the state of being grown. The Growth of the human body depends upon its having first a proper amount of nervous excitement; which exercise only can give, and next a due supply of healthy blood, which depends partly on the food taken, the air breathed, and a right action of the digestive and assimilative organs. All these are absolutely necessary to the full development of the muscular and other tissues of the body; but especially exercise, without which there may be growth, but it will be of a morbid, unhealthy character. The man who earns his living by the sweat of his brow, and he who does nothing but sit at home and pamper his appetites, may be equally stout, and perhaps well-looking; they may both carry the same amount of animal matter, indeed the latter will, in all likelihood, bear more than the former; but if we compare the nature of the development, we shall find it very different: in one case it will be firm and compact, and in the other soft and diffuse, or, as is commonly said, flabby; there is too much adipose matter—fat; and the joints of the frame are not well knit. Some animals attain their Growth much more quickly than man, with whom the process continues generally up to the 20th year, and if it then appears to cease, it is not because new material is not constantly added to the old, but that the supply and waste then becomes equalized, or nearly so. It has been calculated at the end of seven years a man has scarcely a particle of the same matter about him as constituted his frame and substance at the beginning of that period; in a perfect state of health, except as regards fatty deposits, which are not inconsistent with this state, he ought not to increase or diminish in bulk until old age comes on, that is after the 60th year; the supply of material will then begin to lessen, and a falling away is the consequence.

In the earlier periods of life, when Growth is most rapid, it is of vital importance that there should be plenty of exercise, and plenty of good wholesome food: the appetite of a growing child should not be stinted, neither should it be pampered; he is not likely to eat too much of that which is really nutritive and fit for him, and it is a very mistaken kindness to let him eat to repletion of that which is not so. See *Age*, *Appetite*, *Food*.

Gruel. This well known article of invalid diet, is frequently so prepared as to be absolutely injurious, instead of, as it ought to be, wholesome and salutary; the old fashioned Embden Groats, or those called "Robinson's," which are simply oats deprived of their husks, and crushed, are the best materials for making Gruel for adults; they should be boiled slowly in water for two or three hours at least, to extract their nutritive principles. For children, the Prepared Groats are best, as they are ground very fine, and have probably a little wheaten flour mixed with the oatmeal, which corrects its laxative tendency: the best mode of preparation is to mix, say a teaspoonful of the Meal with a little Cold Water, in a basin, taking care to get it properly smooth and free from lumps; into this stir gradually a cupful of Boiling Water, pour the whole into the saucepan, and boil for a quarter of an hour, stirring the while, then strain if at all lumpy, and add half-a cupful of Milk; sweeten with Lump Sugar, and if agreeable, grate into it a very little Nutmeg. The coarse Scotch oatmeal, if well boiled, makes an admirable Gruel; some persons prefer to take Salt in it, and in this way it is perhaps better for weakly stomachs than sweetened. See *Dict*, *Invalids*.

Grutum. A name given by the French to the eruption called Millet Rash. See *Milium*, *Rashes*.

Gryllus Verrucivorus. A kind of grasshopper, which in Sweden has the reputation of destroying warts, by biting off the excrescence and discharging on the raw surface a corrosive liquid.

Guaiacum. The wood and gum resin of the *Lignum Vitæ;* a West Indian tree belonging to the natural order *Zygophyllaceæ*, and called by botanists *Guaiacum Officinalis*, are both used medicinally, for the cure of chronic cutaneous and syphilitic diseases, gout, and rheumatism. The *Wood*, which is very hard and close grained, is rasped small, and from it is prepared the Decoction of Guaiacum; dose from 2 to 4 ounces; it is also one of the ingredients of the Compound Decoction of Sarsaparilla, and other diet drinks taken to purify the blood, and enters into the composition of the Compound Lime Water: an Extract is likewise made from it, of which the dose is from 10 to 30 grains. The Gum is given in Powder in 10 or 20 grain doses, often mixed with Magnesia or Milk of Sulphur: its other officinal preparations are Mixture of Guaiacum, dose from 1 to 3 tablespoonsful, 2 or 3 three times a day, and Simple and Compound or Ammoniated Tinctures, dose from 1 to 2 drachms. Those suffering from chronic gout and rheumatism, especially if of syphilitic origin, cannot do better than take Guiaicum Mixture and Plummer's Pill; the former prepared thus:—Powdered Gums, Guaiacum and Acacia, of each 1½ drachms;

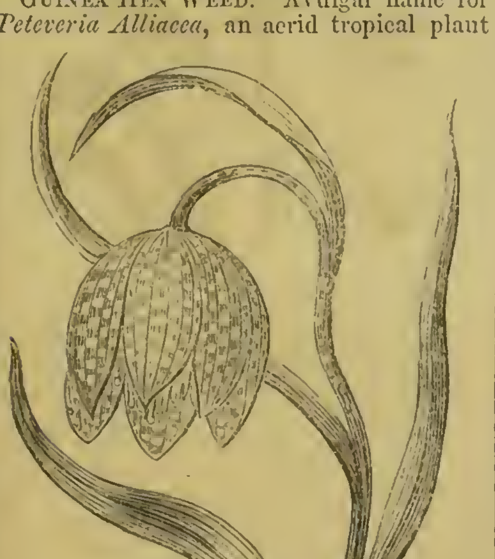
Nitrate of Potash ½ a drachm; Tincture of Conium, or Hyoscyamus 1 drachm, or Tincture of Opium ½ a drachm; Cinnamon Water 6 ounces; mix and take 2 tablespoonsful three times a day, with one of the above named pills every night. If more agreeable to take it in the form of Powder, rub down 3 drachms of each of the Gums with 1 drachm of Nitrate of Potash, and 9 drachms of Compound Cinnamon Powder; take ½ a drachm in a little Milk three times a day.

Guaranine. A vegetable principle discovered in the fruit of the *Paulina Sorbilis.* It precipitates the aqueous solution of the Nitrate of Silver. We do not learn that it has been applied to any medical purposes.

Gubernaculum (Latin for the rudder of a ship). A name given by Hunter to the fibro-vascular substance between the testes and scrotum in the fœtus, because he considered it the principal agent in directing the course of the testes in its descent. See *Testes.*

Guido's Balsam. This was, at one time, a favourite remedy for rheumatic and neuralgic pains; its composition is supposed to have been much the same as the present Soap Linament, with a little Laudanum.

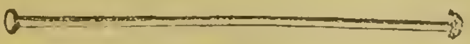
Guinea Hen Weed. A vulgar name for *Peteveria Alliacea*, an acrid tropical plant used in Jamaica to increase the flow of the saliva.



Guinea Worm. A small round worm, with a black head and a white body, not unlike the string of a violin, which is found beneath the skin, between the muscles and cellular membrane of negroes, and others, who have been for a time in tropical climates, particularly on the West coast of Africa; the feet and calves of the legs are the parts into which this parasite chiefly penetrates, and the *symptoms* of its presence are, first itching and irritation of the part, in which, on close inspection, you will generally discover a small blister. The pain, at first, is not acute, but gradually there arises an angry swelling like a boil, and there is much heat and tenderness of the part, with, however, but little disposition to suppuration. This goes on for some time, and then a little black spot, the head of the worm, shows itself in the centre of the swelling. As soon as this is sufficiently protruded it must be taken hold of very gently, and an effort made to draw it out, which effort must be renewed every now and then, care being taken not to pull so forcibly as to break the body of the worm, as, if any part is left in, it is likely to cause a troublesome ulcer. The best plan is to affix the head to a piece of cotton rolled up in the form of a quill, and taking the two ends of this between the fingers and thumbs turn it gently round. The animal varies in length from 5 or 6 inches to as many feet, so that the winding operation is sometimes a tedious one; but patience and perseverance in this, as in most cases, will generally overcome the difficulties. When the whole of the worm is extracted, the wound should be dressed with some kind of healing Ointment, or if it is much inflamed, a simple Water Dressing will for a time be best. Should the worm break, and the part become ulcerated in consequence, it must be poulticed and treated like a common *Ulcer* (which see).

The *Chigre*, or Sand Fly of the West Indies, is another of these troublesome parasites, which abound in hot climates. Like the Guinea worm, it insinuates itself into the soft and tender parts, generally, however, attacking the fingers and toes. It produces similar effects to those just described, but presents no available part for the operator to lay hold of; it, therefore, has to be cut out, and this should be done as early as possible. Some of the negro doctors are very dexterous in extracting this fly, which if suffered to remain will cause deep ulceration of the tissues, and, perhaps, will render amputation necessary. After the extraction of the several bags, which these flies form, the wounds are washed with a strong infusion of Tobacco, or a solution of Sulphate of Copper and the wound is covered with a Tar plaister.

Gullet. The tube which extends from the throat, or fauces, to the stomach, termed by surgeons the *Œsophagus* (which see); it forms the upper portion of the *Alimentary Canal* (which see), and through it, of course, all the food taken must pass, being propelled downward by the action of the muscular fibres, which form one of its coats. It is narrowest at the top—and here, if any where, a morsel of food, or other object too large for the passage, would stick fast, an occurrence which is sometimes attended with serious consequences. Persons, when eating, should have this in mind, and masticate their food well before attempting to swallow; they should also remember, that the food does not simply fall through an opening prepared for it, but is, as it were, taken and passed downward from circle to circle of the muscular rings, which not only open to receive it, but close behind to push it further down; and thus an attempt to swallow food too quickly will interfere with this action, causing a spasmodic pain and a sensation of choking. When a piece of food too large for the passage sticks fast in the Gullet, and cannot be removed, death from suffocation will be likely to ensue. Sometimes the obstruction can be pushed down into the wider part of the passage by means of a finger passed into the opening of the Gullet; or, if it cannot, this may be accomplished by means of what is called a *Probang*, which is a smooth, round piece of whalebone, about 2 feet long, and as thick as a wheaten straw, to the smallest end of which a piece of sponge about the size and shape of a marble is firmly attached. Something like this may be extemporized out of the whalebone rib of an umbrella, or a very thin cane, having a knob of some soft, yielding substance fastened to it. In using the instrument, care must be taken to have the patient's head thrown well back, and to let the chief pressure be upon the back of the throat; the instrument must be well oiled or greased in some way, and pushed steadily and quickly down until the obstruction is felt to give way. If this should be a fish-bone or other jagged object, which is likely to penetrate the membrane, and get firmly fixed, the removal is not so easily effected. A little dexterous management of the fingers will often do this, as it is seldom far in the passage. In all such cases a surgeon should be summoned without delay, for an operation may be necessary. If the obstruction remain long, and be of the nature last mentioned, it may cause inflammation and swelling of the part. If the obstruction be small, such as a pin or a single spine of fish-bone, some crumb of bread well masticated will probably carry it down. When it is removed, there will commonly be a sensation as though the obstacle were still lodged in the throat, which keeps up the uneasiness in the patient's mind; but if still there, a distinct pricking may always be felt when the throat is pressed.



There is sometimes a spasmodic affection of the Gullet which renders the act of swallowing difficult, and induces a belief that something is lodged there; this may be attributed to spasm or hysteria, if it is not caused by the effort to swallow too quickly. A sense of choking and suffocation is sometimes the result of foreign bodies getting into and irritating the windpipe, which lies in front of the gullet. See *Lungs*, *Throat*.

Gulph Weed. A marine plant or plants, so called from the enormous quantity found floating about the Gulf of Florida; we have it also in considerable quantities on our own coasts. It is sometimes eaten raw as a salad, or pickled like samphire; it is slightly aperient, diuretic, and antiscorbutic. Large quantities of it are brought from Devonshire, and consumed as a luxury in London. Whether it consists of one or more species, it undoubtedly belongs to the genus of marine plants called *Lavers* (which see).

Gum (Latin *gummi*). A concrete vegetable substance which exudes from certain trees, and hardens on the surface; it is soluble in water, and insoluble in alcohol, and this distinguishes it from *Gum Resin*, which is so only in spirit. Many kinds both of Gum and Gum Resin are used medicinally, and spoken of in this work under the several heads of the plants from which they come. (See *Acacia*, &c).

Gum is the common proximate principle of vegetables, or the primary form of vegetable textures: in its constituents it resembles starch and sugar, being 51 oxygen, 42 carbon, and 7 hydrogen. It is soluble, glutinous, and mucilaginous; heated it becomes charcoal, boiled in sulphuric acid water it forms sugar. Of Gum, there are several varieties, of which we need mention but three:—1st. Gum Arabic, which is the juice or sap of several species of *Acacia* (which see); it consists, according to Berzelius, of carbon, 42·68; oxygen, 50·95; hydrogen, 6·37: 2nd. Gum of Starch, which is the soluble substance of the fecula: 3rd. Common Gum, which exudes from the bark, and even the pericarp of fruit trees, as the Almond, Cherry, &c.

GUMS. These are the cellular and mucous membranes which cover the alveolar processes of the jaw before the growth of the teeth, the fangs of which they afterwards envelope. They are liable to congestion, inflammation, and ulceration, resulting in abscesses and other diseased conditions of the tissues, to which allusion is here necessary.

Sponginess or *Scurvy of the Gums* is sometimes caused by an accumulation of tartar about the teeth, which is owing to neglect of cleanliness, or it may be owing to an unhealthy state of the blood generally. In this disease, the Gums become soft and spongy, and bleed at the slightest touch; they are also extremely tender, and swell outwardly, receding from the teeth, which eventually are left unsupported and fall out, although they may exhibit no signs of *Caries*. (See *Teeth*).

If a scorbutic habit of body be the cause of this malady, the symptoms may be relieved by attention to the general health, and the course of treatment prescribed under the head of *Scurvy*: a lotion, composed as follows, should be applied with a soft toothbrush, night and morning:—Solution of Chlorinated Soda 1 ounce, Tincture of Myrrh 6 drachms, Eau de Cologne 10 drachms, Water 5 ounces. The Tincture of Myrrh alone is a very good application, if it does not make the Gums smart too much, which it commonly does. Sometimes a morbid growth of the Gum extends downwards so as to cover the tooth, and intervene between it and the opposite one; the remedy for this is the lancet, with which, or a sharp penknife, the extra growth may be cut off without danger: a lotion, composed of Alum and Tincture of Myrrh, about 1 drachm of the former and 4 of the latter to ½ a pint of Water, should be used after the excision, as a styptic.

Gum Boils are the result of inflammation. They are small abscesses, and contain matter which should be let out as soon as possible, by means of a sharp penknife or lancet; but it is useless to attempt the operation until the boil is in a fit state, which may be known by the projection at the sides of the teeth, and the shiny distended appearance of the investing membrane: the process of ripening, as it is called, may be hastened by hot applications to the cheek next to the swelling; and, if the pain is excessive, a leech applied to the gum will probably afford relief; if there are febrile symptoms, cooling aperients should be given, and the patient treated as directed under the head of *Abscesses*.

Inflammation of the Gums often arises from the irritation caused by decayed teeth; the only remedy in this case is the removal of the offending matters; after that, apply leeches, and reduce the system by an antiphogistic course of treatment, if necessary.

The *Gums of Children* often become much swollen and indurated when they are cutting teeth, and in this case, a judicious use of the lancet is almost sure to give relief, first by the loss of blood, and secondly by the assistance thus afforded to nature in a difficult operation. More on this head will be said when we come to speak of *Teething*, (which see).

The appearance of the Gums frequently affords valuable information in investigating the nature of diseases: thus, when swollen and spongy, they indicate scurvy; when there is a blue line along the edge, we may safely assume that lead has been imbibed into the system, either by drinking water passed through pipes of that metal, or by handling it in one or more of its forms and combinations, as painters are obliged to do; a pink line indicates pulmonary consumption; and when there is inflammation, with soreness and sponginess, accompanied by a deepening of the colour, and a fetid breath, we may generally set it down to mercurial salivation; when this is the case, a Wash made of 2 drachms of Muriatic Acid to a pint of Water, will be found efficacious. Of Astringent Washes, none perhaps will be used with better effect than that prepared of Tincture of Myrrh and Alum, prescribed above: a very good and cheap preparation is simply 1 drachm of Alum dissolved in a pint of Water: for foul ulcerous Gums, the Solution of Chloride of Soda, with Camphor Mixture, should be used.

GUMMA. Is the name given to a small tumour, from the resemblance of its contents to the gum.

GUM RASH. Is a species of *Strophulus* (which see), a disease peculiar to infants; it is the same as Red Gum, and has among its varieties Wildfire Rash, and White Gum.

These are all cutaneous diseases, including Rank Red Gum, and other affections well known to nurses and the mothers of families. See *Infancy*.

GUSTOLARY (Latin *gusto*, to taste). A name of the lingual nerve, which passes near to the palate, and is chiefly concerned in tasting: it is a branch of the inferior maxillary. See *Nerves*.

GUTTA (Latin for drop; plural *guttæ*). Hence we have several surgical and medical terms, such as *Gutta opaca*, applied to *Cataract* (which see); *G. serena*, a species of blindness, in which the eye remains clear and apparently unaffected, except that there is unusual dilation of the pupil, which do not contract on the approach of light or any object (See *Amaurosis*, *Eye*); *G. Rosacea*, Rosy Drop (See *Acne*). Then there are certain preparations, such as *G. Anodyna* (Anodyne Drop), a Solution of Morphine; *G. Nigra* (Black Drop), a composition of Opium, Nutmeg, and Saffron, boiled in Verjuice, sweetened with Sugar and fermented with Yeast; it is sometimes called Lancashire Drops; *Gutta Vitæ* (Latin for Drops of Life), is a nostrum formerly much in repute for various internal complaints; its exact composition is not known; but its chief properties appear to have been those of a strong alcoholic stimulant and cordial. There are other preparations having this prefix *Gutta*, which term, under its contractions *Gt.* or *Gtt.*, was formerly much more used in prescriptions than at present; minim is more correct, because more precise in the quantity.

GUTTA PERCHA, or PERTSHA. This valuable article is a Gum resin, the product of *Isonandra Gutta*, a tree belonging to the natural order *Sapotaceæ*, found in India, but more particularly in Sumatra and the neighbouring islands. This article has recently come into extensive use in medical and surgical practice; possessing the property of being easily moulded, when warm, to any required shape, it has been found a very useful adjunct to the repair of fractures, and various other injuries to which the human frame is subject. It is also waterproof, and, a sheeting prepared from it is now used in most hospitals and sick rooms, as a protection to bedding from the natural and other discharges of the patients.

GYMNASTICS (Greek *gymnazo*, to exercise naked). Bathing, swimming, leaping, wrestling, and the rude sports of the arena generally, would come under the ancient meaning of this term; but we apply it in a more restricted sense to those exercises which are deemed conducive to health, by developing the muscles, and promoting the action of the secretory and excretory organs. Gymnastics now form part of the training of our youth of both sexes, and it is well that it should be so; for, unless there is a proper development of the physical powers, the mental growth is likely to suffer. The gymnasium as well as the school must help to form the men and women of the coming generation, or we shall have a sickly and stunted race, both mental and bodily. See *Exercise*.

GYMNOSPERMÆ (Greek *gymnos*, naked, *sperma* seed). A botanical term applied to plants which have their seeds destitute of a pericarp. Its opposite is *Angiospermæ*.

GYPSUM (Greek *gypsos* chalk, from *geos* earth, and *opse* to bake). This is chalk in combination with sulphuric acid and water; when these latter, or a portion of them, are driven off by heat it falls into powder, and constitutes what we call Plaster of Paris, useful for modelling and taking casts of parts of the human frame, but not otherwise employed in connection with medicine and surgery.

GYRI (plural of the Latin *gyrus*, a circuit). Applied to the spiral cavities of the internal *Ear* (which see).

HABIT (Latin *habitus*). State or condition of the body: thus we say a man is of a full or plethoric habit. It also means the effect of a frequent repetition of the same act, or the manner of doing anything. We are all, more or less, creatures of Habit, and our thoughts and actions alike run as it were in grooves formed in early life, and becoming deeper and deeper as we advance in years, until it becomes almost impossible to get out of them. How important, then, is the formation of *good* Habits; bad ones are easily acquired, and they commonly have a most pernicious effect upon the bodily health, as well as upon the state of the mind. Habits of cleanliness, of regularity in exercise and diet, and all matters pertaining to the performance of the bodily functions, should be taught as soon as the child is old enough to have any independent action. Habits of control, too, over his passions and appetites are of equal importance; in order that the "use" which, the proverb tells us truly, "is second nature," may not be in reallity an *abuse* of those physical and mental powers which the great Creator intended should be made subservient to our good and his glory.

Scarcely need we insist on the fact that Habits and occupations of life greatly affect the constitution, and modify the state of health, producing peculiar diseases, or curing and eradicating those which exist in the frame. Habits of intemperance, both in eating and drinking, and of sensual indulgences of every kind, are daily producing the most fearful effects around us; and every mother, and other person who has the care of children, ought to know and feel the importance of training the child in the way it should go. This is a subject on which we might greatly dilate, but it belongs rather to the moralist than the physician; under the several heads of *Exercise*, *Health*, *Occupation*, and others, included in our volume, allusion is, however, made to it.

HÆMA (Greek *aima* or *aimatos*, blood). From this root come several medical terms, such as *Hæmatemesis*, a vomiting of blood caused by hæmorrhage in the stomach—this was called by old physicians *Vomitus cruentus*; *Hæmatin*, the colouring matter of logwood, whose scientific name is *Hæmatoxylon Campechianum*; *Hæmagogues*, expellers of blood, medicines which promote the catamenial and hæmorrhoidal discharges; *Hæmalopia*, or *Hæmalops*, bloodshot eye; *Hæmatocele*, a swelling of the scrotum or spermatic chord, caused by effusion of blood; *Hæmatodes*, bloody, as applied to a morbid or fungoid growth (see *Fungous Hæmatodes*, under the head *Fungoid)*; *Hæmatology*, an account or history of the blood; *Hæmatoma*, a blood-like tumour; *Hæmatosine*, the colouring matter of the blood; *Hæmatosis*, the formation of the blood; *Hæmaturia*, the passing of blood in the urine; *Hæmopthalmus*, an effusion of blood into the chambers of the eye; *Hæmoptæ*, or *Hæmoptysis*, the spitting or expectoration of blood, sometimes called *Pneumorrhagia*; *Hæmorrhage*, the loss of blood; *Hæmorrhæa petechialis*, a term applied to the chronic form of purpura—it has also been called *Petechiæ sine febre*, and sometimes *Land Scurvy*; *Hæmorrhoidal*, a term applied to the sciatic nerve, and to the arteries of the rectum, because they often bleed; and *Hæmorrhoids*, literally a discharge of blood, but commonly applied to *Piles* (which see); *Hæmastaciæ*, stagnation of blood; and *Hæmastatics*, medicines which stop hæmorrhages (see *Styptics*). There is also a plant called *Hæmanthus*, or the Blood-flower, of the natural order *Amaryllidæ*, with the juice of whose bulbs the Hottentots are said to poison their arrows.

HÆMATEMESIS (Greek *aima*, blood; and *emio*, to vomit). For a full account of the causes, symptoms, and treatment of this disease, see vomiting and spitting of blood, under head of *Blood*.

HÆMATOCELE (Greek *aima*, and *kele*, a tumour). The soft fluctuating tumour of the testicles, so called, is generally caused by a blow or other injury to the part, or by the division of a vessel in the operation for hydrocele; it is simply blood effused into the cavity of the *tunica vaginalis*, which flows out as soon as an opening is made for its escape, and, this is the only way of getting rid of it; the operation is the same as that for *Hydrocele*, (which see), and *Testicle*.

HÆMOPTYSIS (Greek *aima* and *ptyo*). Spitting of blood, sometimes produced by a fulness of the vessels of the lungs, but more commonly by their rupture, in consequence of ulceration. The blood in this case is of a more florid colour, and smaller in quantity than when vomited up from the stomach, as in the preceding disease: this may be either symptomatic of disease, as in consumption, when it would be called *secondary*, or it may be *primary*, or *idiopathic*, constituting the disease itself. Again, it may occur at irregular or regular periods, as after the suppression of some customary evacuation, in which case it is termed *vicarious*. Congestion of the vessels of the lungs most commonly causes spitting of blood, which generally proceeds from the mucous membrane of the bronchial tubes following the course of the expelled air in exhalation. When it is occasioned by rupture of the vessels, there is so great an expulsion of the vital fluid that the case is soon likely to have a fatal termination.

Hæmoptysis sometimes occurs in youth, as bleeding from the nose may, and we then consider it symptomatic of a morbid state of the constitution. It is very frequently *vicarious*—that is, substituted, or acting for another; it is most commonly so of the female menstruation, and does not often lead to any serious results. It is mostly *secondary* as a symptom of *Consumption* (which see), although that disease will sometimes run its course without any spitting of blood; and sometimes this may occur at the commencement of it, preceding for some years any of its more marked symptoms.

One of the organic diseases which produces Hæmoptysis is that affecting the left side of the heart: in this case the blood is impeded in its passage through the lungs, which become loaded or congested in consequence, and hæmorrhage ensues. Violent exertion in speaking, or singing, will also sometimes cause spitting of blood, which, in all cases, should be looked on with apprehension, as, whether considered as a symptom or a disease, it is a truly formidable malady, to which plethoric people, or those who have narrow and ill-formed chests, are especially liable.

Treatment. As congestion is most commonly the exciting cause, the removal of blood from between the shoulders, or the hollow of the throat just above the breast bone, is one of the remedial means to be employed. Leeches, or the cupping apparatus, will be the proper agents for this purpose. Dr. Graves says that "no topical bleeding appears to me so useful as the oozing of blood from that situation where the cough is teazing, and Hæmoptysis considerable; six leeches should be applied every six hours, or in less severe cases a smaller number, and at more distant intervals."

Elevating the breast and shoulders, admitting plenty of fresh air, with spare diet, and perfect quiet, are among the other most useful measures to be adopted. The bowels should be freely opened by means of a saline purgative, preceded, where they are costive, by from 3 to 5 grains of Calomel; and assisted by an enema of Salt and Gruel; if the bleeding continues, 2 grains of Powder of Ipecacuanha should be administered every quarter of an hour until it abates; the chest also should be sponged with Vinegar and Cold Water, and a dessert spoonful of the former in half a wineglassful of the latter will be a useful accompaniment to any other medicines which may be thought necessary. The remedies will vary considerably in accordance with the peculiarities of the case; sometimes mineral acids, such as the Dilute Sulphuric, from 15 to 20 drops in Cold Water three or four times a day; in some cases 10 or 15 drops of Spirits of Turpentine may be given, and as a ready remedy, when no other is to be obtained, Common Salt, a teaspoonful at the time, repeated frequently. To get up the strength after an attack of this kind, nutritious diet, with preparations of Iron, or bitter tonics, and mineral acids. Persons subject to Hæmoptysis, from whatever cause, should live abstemiously, avoid late hours, exposure to cold or great heat, and excitement of any kind. In habitual and protracted cases, Dr. Graves recommends a change of residence to Australia.

HÆMORRHAGE (Greek *aima*, and *rhegyo*, to burst forth). A flux of blood from the nose, lungs, intestines, or any other part, as we apply the term, which by the ancients was understood to mean a bleeding at the nose only. Of the different kinds of internal Hæmorrhage, we have spoken above, or at other parts this volume; of the external, as from wounds, something has been said under the head of *Arteries*, and more will be under that of *Wounds*, and also of *Ligature*, *Styptic*, and *Tourniquet*, all of which are resorted to for the stopping of Hæmorrhage; although in the first and last only can much dependance be placed, as it is of a very serious character. We would just make a few observations here on the spontaneous cessation of Hæmorrhage, which sometimes occurs when a considerable quantity of blood has been lost from a vein or artery, and the patient faints, in this case death does not immediately ensue, nor does the bleeding recommence. After the return to consciousness, although at no distant period, repetitions of the bleeding may occur, and ultimate exhaustion from loss of blood take place. In operations, such as the removal of a leg or arm, it is only found necessary to tie or "take up," as we term it, the larger arteries, although those which are severed are very numerous; the smaller ones stop bleeding of themselves, and their orifices become closed or obliterated by a natural contraction, which is favoured by the application of cold and styptics.

HAIR. This is one of the common integuments of the body, consisting of dry, elastic filaments arising from the skin of all animals except fishes and reptiles, that is of all warm-blooded animals; it grows in the cellular membrane, having a cylindrical root surrounded by a capsule, with nerves, &c., which is called the bulb, and which is nourished by a fluid in the membrane.

Exclusive of the animal matter which forms the basis of Hair, and which is the same in all, there is a colouring matter which is separable from it, and the hue of which varies according to the kind of hair, and to this the difference of tint is owing. To this fatty substance, also, Vaucquelin attributes the suppleness, elasticity, and unalterability of Hair, and also that it burns rapidly, and combines with alkalies to form soap. All animal integuments, such as horns, nails, feathers, fur, wool, are, to a certain extent, supple and elastic, and all are formed of the same animal mucus, and include in their composition a portion of this oil. It has been found that Hair is soluble in water at a very high temperature; as in a Papin's Digester, where it leaves a residue of the oil above spoken of, mixed with sulphuret of iron, and some sulphuretted hydrogen, the iron being found most abundant in the darkest Hair; sulphur appears to be the ingredient on which the action of the black dyes of red or grey Hairs depend.

The whole subject of the *Growth* and *Structure of the Hair* is one of the most curious and interesting connected with our animal economy: in order to present it clearly and distinctly to our readers as possible we give it in a series of propositions:—

1. Hair is found to grow on all parts of the surface of the body, except the palms of the hands and the soles of the feet.

2. The Hair differs considerably in length, thickness, shape, and colour; according to situation, race, family, sex, and age.

3. As Hair is a bad conductor of heat, it is obviously one of the most appropriate coverings for the bodies of animals, or the head of man, because heat escapes very slowly through it. The surface of the body is protected from the influence of excessive heat, moisture, and electricity, by means of the Hair.

4. "The Hair," says Mr. Paget, the eminent anatomist, "in its constant growth, serves, over and above its local purposes, for the advantage of the whole body, in that, as it grows, it removes from the blood the bisulphate of protein and other constituents of its substance, which are thus excreted from the body." It is therefore evident that the Hair performs an important part in the animal economy. It has been remarked that shaving or cutting the Hair assists in the removal of carbon and hydrogen from the system; consequently long hair is injurious.

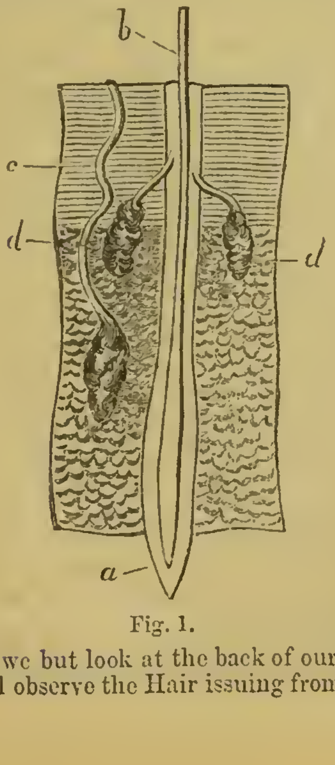


Fig. 1.

5. If we but look at the back of our hands we shall observe the Hair issuing from small depressions in the skin. These depressions are the orifices of the hair-follicles, which extend to various depths in the corium, and are always lined with cells of the same kind as those found in the epidermis.

6. Fig. 1 is a diagram that will explain how the Hair is retained in the skin, and if you examine it attentively you will be able to understand the relative positions of the various parts. The diagram represents a section of the human scalp, showing the manner in which the Hair penetrates it; *a*, is the hair-follicle; *b*, the Hair within the follicle; *c*, the epidermis; *d d*, the sebaceous glands opening into the hair-follicle; *e*, the fatty tissue, with the cellular tissue underneath it, in which the base of the hair-follicle is embedded.

7. As we have seen above, the sweat-glands are connected with the hair-follicles; and, in the accompanying figure, you will observe that there are no less than six of these glands opening into the hair-follicle which belongs to the beard.

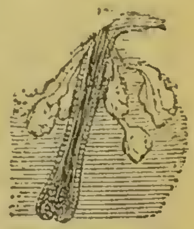


Fig. 2.

8. The *shaft* of the Hair is that part which you discern above the surface of the skin (fig. 1, *b*), and if you follow it into that membrane, you will see that it is lodged in a fold of what is termed basement membrane, or its follicle, which is larger or bulbous at the lower part, like the Hair which is inside it. The accompanying diagram will enable you to understand the relative positions of the adjacent parts to the Hair.

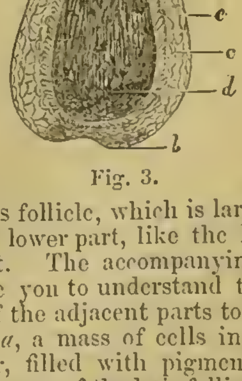


Fig. 3.

(Fig. 3. *a*, a mass of cells in the centre of the hair, filled with pigment; *b*, basement membrane of the hair follicle; *c*, layer of epidermic cells; *d*, imbricated cells, loaded with pigment at the lower part, and becoming gradually compressed as they approach the surface of the skin; *c*, layer of imbricated cells.)

9. The hair-follicle is merely a turning-in of the skin, so as to invest the hair, and its inside is a continuation of the epidermis; for the cells are of the same nature (fig. 2, *c*), the deeper ones being somewhat round, while the superficial ones are flattened and scaly (*c*). The follicle is kept in its place according to the size and strength of the Hair, by means of the adjoining tissues (see, 6, fig. 1), and the small vessels, called capillaries, which afford materials for increase.

10. The hair grows from the bottom of the follicle, being formed by the secretions of these cells, and being gradually pushed upwards by them, so as to increase its length.

11. As the cells ascend in the bulb of the Hair, they become larger until they reach the central part—hence the increased size of the bulb; but when the shaft commences, the cells become longer, denser, and, in fact, fibrous.

12. By simply crushing the Hair, we are able to discern its fibrous nature; but this may be more readily demonstrated after the hair has been softened by maceration in an acid.

13. Hair consists of a *cortical* or fibrous horny texture which invests it, and a *medullary* or pith-like substance, which is observed on the inside.

14. The *cortex*, or bark of the Hair, is formed by a single layer of cells being imbricated (fig. 2, *c*), and forming a thin layer outside the fibrous tissue of the shaft. These cells overlap each other, so that their edges give a serrated feel and appearance to the Hair. If you rub your finger from root to point over a Hair, and then rub it backwards, you will find that its surface is serrated; and if the Hair is very large, you will find that the roughness is greater, because there is usually a double series of imbrications in the large Hairs.

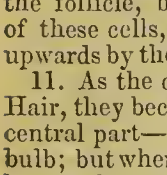


Fig. 4.

(Fig. 4. A portion of Hair magnified so as to show the imbrication of the outside).

15. If we make a longitudinal section of the shaft of a Hair, we find that the centre is made up of a series of cells, filled up with pigment, and contained in the fibrous part of its substance. In order to observe this appearance, we must use a sharp razor to make the section, and a magnifying power of about 150; but as every person is not able to do so, we have given a diagram of the appearance of the longitudinal section of the Hair.

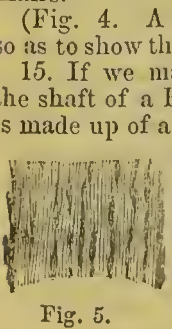


Fig. 5.

(Fig. 5. Longitudinal section of a Hair, showing the imbrication of the cortex, and the pigment cells in the fibrous part).

16. If we take a Hair, and cut it across with a sharp razor, so as to make a very thin section of it—a mere shaving, in fact—we shall observe three parts: first, a thin varnish-like layer of flattened cells; then a set of fibres, which are placed further apart as they approach the centre, which is dotted here and there with pigment-cells in some Hairs, but is always loose, and looks like pith.

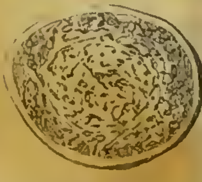


Fig. 6.

(Fig. 6. Transverse section of a Hair, showing the three different textures).

17. The Hair varies in length according to situation, sex, and race. In the Kurilian race, there are individuals who have Hair growing down the back and covering nearly the whole body. The average length of the beard is ten inches, but some men have had beards that swept the ground. Women have also been met with whose hair reached to their feet, but yet the ordinary length is only from twenty to forty inches.

18. Colour influences its texture: thus flaxen Hair is said to be the finest, and black the coarsest; and as Hair becomes grey, it becomes coarser. Withof, a German anatomist, states that a square inch of the skin of the head contains 598 black Hairs, 648 chesnut Hairs, and 728 flaxen Hairs.

19. The colours and shades of the human Hair are very numerous, and depend, in a measure, upon age, climate, and race. The following table will give some idea of the varieties caused by race and climatal influence:

Race or Tribe.	Hair.
Afghans..........	black.
Arabs............	black and crisp, with grizzley beards.
Armenians........	dark.
Berberines, or Nubians of the Nile.........	dark, and strongly frizzled.
Californians......	black, long, very strong, and not woolly.
Chinese & Indo-Chinese......	thick, coarse, lank, and black, with scanty beards.
Circassians........	brown or black.
Egyptians........	black and crisp.
Endamênes (New Guinea)	thick, rough, and shining, without being woolly.

Esquimaux	coal - black, straight, strong, and long.
Ethiopian	black and crisp.
Greeks	black, brown, and flaxen
Kamtschatkans ..	black.
Kurds............	black.
Kurilians or Ainos	very black.
Mantschoos	brown.
Mexicans	thick, black, coarse, and glossy; beard thin.
Mongolians	black, stiff, straight, and sparing.
Ossetines	brown or light, and sometimes red beards.
Patagonians	lank and black; beard scanty.
Singhalese........	black.

It is worthy of remark with respect to the colour of the Hair, that it varies with the colour of the iris, or coloured part of the eye, and the general hue of the skin. It has been remarked, and with more degree of truth than is generally believed, that the darker the Hair the stronger the body, and *vice versa*.

20. The difference of colour in human Hair appears to depend, according to Vauquelin, on the presence or absence of a peculiar oil. He states that black Hair consists of—1. An animal matter, which constitutes the greater part. 2. A white concrete oil, in small quantity. 3. Another oil of a greyish-green colour, more abundant than the former. 4. Iron, the state of which in the hair is uncertain. 5. A minute proportion of oxide of manganese. 6. Phosphate of lime. 7. Carbonate of lime, in very small quantity. 8. Silex and sulphur, each in considerable quantity.

21. Hair is remarkably elastic and strong. A single Hair from the head of a boy only eight years of age supported the weight of 7·812 grains; and one from the head of a man twenty-two years of age supported 14·285 grains. Weber states that a Hair 10 inches long will stretch to 13 inches.

Management of the Hair.—Pass a fine tooth-comb, at regular intervals every twenty-four hours, through the Hair, in order to keep it from matting or entangling; separate the Hairs carefully and repeatedly, so as to allow the air to pass through them for several minutes; use a brush that will serve the double purpose of cleansing the scalp and gently stimulating the hair-bulbs. Before going to bed, it will be desirable to part the Hair evenly, so as to avoid false folds, or what is commonly called turning against the grain, which might even cause the Hairs to break. Such are the ordinary requirements with regard to the management of the Hair. Some persons carry to excess the dressing and adornment of the Hair, especially those who are gifted with that of the finest quality. Thus, for example, females who are in the habit, during the ordinary operations of the toilette, of dragging and twisting the Hair, so as almost to draw the skin with it; the effect of which is, in the first instance, to break the Hairs and fatigue the scalp, and finally to alter the bulb itself.

Management of the Hair in Childhood. As this is an important branch of our present subject, future appearance and comfort depending greatly upon it, we shall devote some space to directions thereupon. Ablution and friction are the most requisite means for keeping the skin of the scalp in a healthy state, which is necessary to the proper growth of the Hair. Remove the epidermis by washing and rubbing frequently, once a day is not too often, although once a week is commonly thought frequent enough, and where it is so, soap should be used, as simple water will not remove the tough and clogged epidermis which obstructs the growth of the Hair. In the case of daily ablution there is no necessity for this, indeed it would be injurious, as it would remove too much of the oily matter by which this growth is encouraged and facilitated: by the too frequent application of soap, the Hair is rendered dry and brittle; with proper attention to cleanliness it needs very little of this, or any solvent of oil. For the long Hair of girls, occasional washing with the Yolk of an Egg may be beneficial, and for all, a little grease is necessary about every two or three days. This, although it does not act as a stimulant, as many suppose, adds to the growth of the Hair, by allowing it to escape from its follicles or secreting cavities; it may be rendered stimulating by the addition of Cantharides or Spirit of Ammonia, one or other of which is no doubt employed in the preparation of the celebrated Rowland's Macassar. As to the kind of grease to be used, it is really of little consequence; some animal oil is perhaps the best; the vegetable oils generally being too drying and heating. Bear's Grease is very good, although, not perhaps better than any other animal fat; hence the public do not suffer much from the pleasing delusion that they purchase this grease in the pots which are said to contain it.

But rubbing the scalp, and combing the hair, come before greasing, and both these operations should be regularly, frequently, and gently performed; if the towel be too rough, or the comb too sharp-pointed, or the brush too stiff and penetrating, they will be likely to set up inflammatory action in the skin: to avoid this danger, some persons are accustomed to use soft brushes only, but this is a practice we cannot recommend, as a brush of this kind will not penetrate the poll itself, and will have little or no effect upon a stubborn crop of Hair; the brush, like the comb, should always be felt, but not painfully so, and if injury is ever done by either, it is the fault of the hand that directs it, and not of the instrument; let this be properly used, and it will ever prove serviceable. We do not recommend the small-toothed comb for children; if used at all, it should be very gently and carefully.

We were speaking of grease for the Hair, and said that animal oil or fat was the best; Horse Fat is largely used in the manufacture of the so-called Bear's Grease, and it is a very good application. Neat's Foot and Trotter Oil are both good; and so is Cod Liver and Castor Oil, notwithstanding that the latter is vegetable, its thickness prevents its drying so quickly as Olive or Almond Oils, which are generally used: pure Lard does perhaps, as well as anything, and this, with a little scent, generally constitutes the article sold under the name of Scented Pomade; Suet although of itself too hard, makes a very good application, when mixed with an animal, or even with a vegetable oil; this latter appears to be the usual composition of *Pomatum* (which see.)

Diseases of the Hair. These are marked by an alteration of its natural colour, condition, or quantity, sometimes by its loss altogether, which may be the result of age or disease; in the latter case it may be confined to the skin, as in *Porrigo favosa*, or to the Hair follicle itself, as in *Porrigo decalvans*, or, as it is now more commonly called, *Alopecia circumscripta*, that is, circumscribed baldness; in this case the Hair falls off without any apparent cause, and leaves circular patches of smooth shining skin, surrounded by healthy Hair, which stands up abruptly around the edges: sometimes there are only two or three patches, at other times they are numerous; they may be quite isolated, or as in some cases joined together by narrow pathways, as it were, which can be seen through the Hair. The cause of this disorder does not appear to be well understood, but it may be debility, or a want of vital power in the general system, or the part affected, it having been found that a tonic course of treatment, and stimulant applications, will sometimes cause the Hair to grow again. Nothing better for this purpose can be used than Castor Oil and Tincture of Cantharides, in the proportion of one-fourth of the latter, to 3 of the former. For the baldness caused by age, of course there is no remedy; this is the result of constitutional weakness, which no medicinal, nor dietary treatment will repair. (For more remarks upon this head, see *Baldness*.)

A change in the colour of the Hair may be produced by fever, or some other acute disease affecting the whole system, as well as by age; in the latter case it is gradual, and usually extends over many years; in the former it is more rapid, but not so much so as the change produced by some powerful emotions of the mind, fear especially, under the influence of which a person's Hair has become perfectly blanched in the course of a few hours: from a darker colour to grey or white is the most common change of colour, but cases are on record in which the sudden alteration has been from black or brown or red, and even from brown to black. Why this sudden effect should be produced by strong mental emotion, we know not; if it were gradual, we might safely attribute it to a diminution of vital power, which is sure to ensue in the reaction after undue excitement. Such is the case in intemperance and other excesses, which often cause a change of colour, if not a loss of the Hair altogether. During and after pregnancy the head sometimes loses its natural covering; a stimulant application will generally cause it to grow again, especially if the patient recovers her health and strength. The following preparation for this purpose has been recommended as almost a complete specific:—Powdered Cantharides, 1 ounce; Purified Spirits of Turpentine, 3 ounces; Neatsfoot Oil, 5 ounces: put the first two ingredients into a bottle together, and let them stand for a fortnight; strain, and add the last; shake up well, and apply to the head every night and morning; if it irritates the skin too much, increase the quantity of Oil; if, on the other hand, it appears too weak, so as not to produce a sensation of heat, diminish the proportion of Oil. The unpleasant odour is a great objection to the use of this preparation; a little Essence of Bergamot may be added, but this will not hide the scent of the Turpentine. The Castor Oil and Tincture of Cantharides previously recommended will no doubt have as good an effect, and this is certainly much more pleasant to use, especially if slightly perfumed. This stimulant application will often retard the loss of Hair in age, and the premature baldness which sometimes occurs. (For further particulars on this head, see *Skin Diseases.*)

Removal of the Hair is common in those febrile and inflammatory diseases in which it is desirable to keep the head cool, and also in several skin diseases which affect the scalp; it may be cut off with a pair of scissors, or shaved close, the latter is the better mode of procedure. Patients, especially females, sometimes object to this, but they should make up their minds to the necessity; the more especially, as it is likely, that if the disease be so severe as to require the locks to be shorn, they will, during convalescence, come out of themselves, to make way for a fresh crop, and the growth of this will be facilitated by the previous entire removal of the old Hair.

When this natural covering is removed, care should be taken to protect the head from cold, otherwise, neuralgic or rheumatic attacks may be looked for.

There is no doubt that frequent cutting strengthens the Hair, as frequent brushing and combing promotes its growth, but it should not be cut too closely, nor more frequently than about once in three weeks.

Among the diseases to which the Hair is subject, we should have mentioned that, almost peculiar to Poland, in which it becomes thickened and matted together by a glutinous kind of sweat; in this condition the Hair not only bleeds, but becomes sensitive, probably from the irritability of the skin at its base. See *Plica Polonica.*

HAIR GLOVE. This is a glove woven of horse-hair, with the ends left on; it is used to remove the superfluous cuticle, and in all cases where counter irritation is required, may be employed with advantage. See *Friction.*

HAIR LICHEN. A variety of lichenous rash, called *Lichen pilaris*, in which the pimples grow about the roots of the hair; they desquamate in about ten days.

HAIR POWDER. A fine powder of flour or starch; it is commonly scented, and in this state is known as Violet Powder. It was formerly much used for sprinkling over the head, but that fashion has now nearly gone out. Under the name of Baby's Powder, it is much employed in dusting infants with, after they are washed, to absorb any moisture that the towel may have left; applied to parts that are chafed or excoriated, it has a very beneficial effect.

HAIR PYRITES. The native sulphuret of nickel, which occurs in capillary filaments, is so called by the Germans.

HAIR SALT. A native sulphate of magnesia; it sometimes occurs as a fine hair-like incrustation upon the damp walls of cellars and in buildings.

HAIR WORM. A filiform or hair-like animal, found in fresh water or in the earth, of which there are several species; it belongs to the genus of worms called *Gordius*. It is sometimes swallowed in the water which we drink, and may therefore be included in the list of intestinal *Worms*, (which see), and *Gordius*.

HAIR-BRAINED PASSION. A kind of temporary madness, which has been called by M. Pinel the *Mania Sans Delire*, and ascribed to the effects of a want of proper training of a mind naturally perverse and unruly. See *Madness*, *Passion*.

HALITUS (Latin *halo*, to breathe). An aqueous vapour or gas for *Inhalation*, (which see).

HALLUCINATION (Latin *hallucinor*, to mistake). Depraved or erroneous *Imagination*, (which see).

HALO (Greek *alos*, an *area*). The circle or ring surrounding the nipples, generally called *areola*.

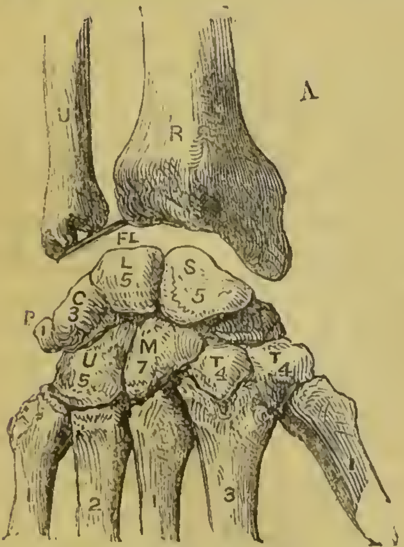
HALOGENIA or HALOGENS (Greek *als* salt, and *gennao*, to produce). A name given by Berzelius to those substances which, by combination with metals produce saline compounds, such as bromine, chlorine, fluorine, iodine which are simple halogens, and cyanogen, which is a compound halogen.

HALOID (Greek *als*, sea-salt, and *eidos*, resemblance). A term applied to those compounds which have a metal on the one hand, and chlorine, fluorine, iodine, and the radicals of the Hydracids in general, excepting sulphur, on the other. These compounds are called *Haloid Salts*, because in construction they are all similar to sea-salt; and the term *Halogenous* is applied to chlorine and those elements by which the above salts are generated.

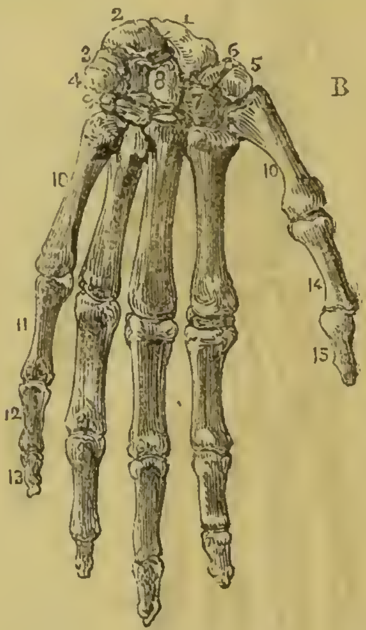
HALO-SIGNATUS. The name given by Sir C. Bell to the impression of the ciliary processes on the anterior surface of the vitreous humour, because it consists of a circle of radiations. See *Eye*.

HAND. In Latin *manus*, hence manuals—books for the hand, or handy books, &c. The word itself is Saxon, coming most likely from *henton*, to follow, take, or seize; we find something like it in the Greek *kandano*, and the Latin *hendo* in *prehendo*. From its derivatives, handy, handsome, &c., it would seem to proceed from a root signifying beauty and fitness, and nothing could be more appropriate than such a derivation, as all must admit who have studied the anatomical construction of this important organ. We recommend each of our readers as may wish to have a full understanding of this, connected with a sense of God's wisdom and goodness, to peruse attentively Bell's eloquent Bridgewater Treatise on the subject. We shall endeavour to place before them such a description as may suffice for all purposes which it is the object of this book to answer.

Let us observe, first that the Hand consists entirely of small bones, so constructed and articulated, or jointed together, as to conduce in the greatest possible degree, alike to strength and flexibility. There are in the structure altogether 27 bones, which may be arranged under three divisions, as follows: 1st. The *Carpus* or wrist; comprising the *Scaphoid*, or boat-shaped; the *Semilunar*, or half-moon; the *Cuneiform*, or wedge-like; the *Pisiform*, or pea-like; tho *Trapezium* and the *Trapezoid*, both four-sided; the *Os magnum*, or large bone; and the *Unciform* or hook-like. 2nd. The *Metacarpus*, including the four bones which constitute the palm and back of the hand; the upper ends have plain surfaces, the lower convex; sometimes the first bone of the thumb is placed in this *metacarpal* division, and sometimes in the 3rd, *Pollex* or thumb, which has 3 bones, like each of the 4th, the *Digiti* or fingers, which consist of 12 bones arranged in three *phalanges*, or rows, giving to each finger two joints, besides that which connects it with the metacarpal, or 2nd division.

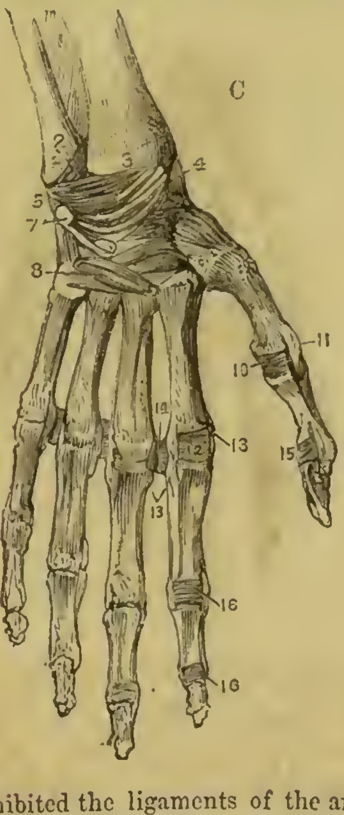


After this general outline of the bony structure, our readers will be better prepared to enter into the minuter details, as exhibited in the diagrams which we now proceed to place before them. Diagram A., from Wilson, shows us the dorsal or back surface of the bones of the carpus, disjoined from their articulation with the lower extremities of the *Radius* and *Ulna*, which constitute what is called the Forearm, being the lower division of the limb (see cut, under head *Fractures*, p. 291) R and U in the diagram, distinguish these bones, and F, the inter-articular fibro-cartilage, which is attached to the styloid process of the ulna, and to the margin of the articular surface of the radius; on it, when in their natural state of connection, work the carpal bones. S. L. C. and P. representing respectively the scaphoid, the semilunar, the cuneiform, and the pisiforme, the figures 5, 5, 3, 1, showing the number of other bones with which each articulates. In the second or carpal row, we have T. T. M. and U. the trapezium, trapezoid, os magnum, and unciform, articulating respectively with 4, 4, 7, and 5 other bones. The longer bones in the diagram are those of the metacarpus, the figures on them showing with how many other bones they articulate.

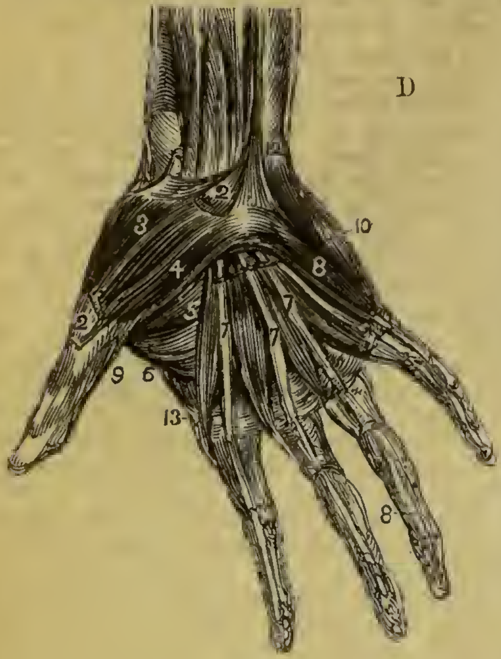


In diagram B, also after Wilson, we have the left Hand, viewed in its anterior or palmar aspect, that is, with the under side turned towards us; figures 1, 2, 3, 4, make the upper row of carpal bones, as named above; 5 is the extreme bone of the second row, the trapezium; and 6, a groove in it which lodges and protects an important tendon, that of the *Flexor carpi radialis;* 7, 8, and 9, are the three other bones constituting the second carpal row, and also named above; 10, 10, mark the 5 metacarpal bones; 11, 11, the first row of phalanges; 12, 12, the second row; 13, 13, the third row, or as they are called unequal phalanges; 14 is the first phalanx of the thumb, which, according to this arrangement, has we see but two bones, 15 being that at the extremity. Into the peculiarities in the conformation of all these bones, we need not enter; much might be said about the wonderful marks of wisdom in design, and constructive skill, which they all exhibit, each being intended, and admirably adapted, to answer a particular end in the various motions of the organ to which they belong.

But how, it may be asked, are these motions accomplished? Like all the other motions of the body, by means of muscular dilation and contraction. Of the muscles of the Hand we shall speak presently; at present we would call our readers' attention to the articulations and ligaments, by the latter of which the bones are kept in their proper positions. In the following diagram (C), are exhibited the ligaments of the anterior aspect of the wrist and Hand; 1 is the lower part of the Interosseous membrane, which occupies the space between the ulnar and the radius; 2 is the Antero-inferior radio-ulnar ligament; 3, the Anterior ligament of the wrist joint; 4 is the External, and 5, the Internal Lateral ligament; 6, the Palmar ligaments of the carpus; 7, Pisiform bone, with its ligaments; 8, Ligaments connecting the second range of the carpal bones with the metacarpal, and the latter with each other; 9, the Capsular ligament of the carpo-metacarpal articulation of the thumb; 10, the Anterior ligament of the metacarpo-phalangeal articulation of the thumb; 11, one of the lateral ligaments of that articulation; 12, Anterior ligament of the metacarpal-phalangeal articulation of the index-finger; from the other fingers this has been removed; 13, Lateral ligaments of the same articulation; 14, Transverse ligament connecting the heads of the metacarpal bones of the index and middle fingers, the same ligament is seen between the other fingers; 15, Anterior and one lateral ligament of the phalangeal articulation of the thumb; 16, Anterior and lateral ligaments of the phalangeal articulations of the index finger; the anterior ligaments are removed in the other fingers, but the lateral ligaments remain. From this the non-professional reader may form some idea of the complexity of the structure we are attempting to describe, and the number and position of the ligamentous chords, and bands, which are, as it were, woven across and around the joints.



But why speak of complexity of structure, when we have as yet said nothing about the membranes, and other tissues, which fill up the bony cavities, and go to form the perfect hand? Of the veins, and arteries, and capillary vessels by which the vital fluid is circulated through all its parts; of the network of nerves, those electrical lines of sensation; of the muscles, which, according as the will directs, move the joints this way and that, contract or expand the fingers, close the hand for a friendly grasp, or clench the fist for the deadly encounter. One more diagram we must give, to exhibit the muscles, the cords and pulleys by which the delicate machinery is worked. Diagram D gives us an inner or palmar view of the hand, divested of the skin: 1 is the Annular ligament; 2, 2, Origin and insertion of the Abductor pollicis muscle, the middle portion having been removed; 3 is the Flexor ossis metacarpi, or Apponens pollicis; 4, Superficial portion of the Flexor brevis pollicis; 5, deep portion of the same; 6, Adductor pollicis; 7, 7, the Lumbricales muscles, arising from the deep Flexor tendons, upon which the figures are placed; 8, one of the tendons of the deep Flexor passing between the two terminal steps of the tendon of the Flexor sublimis to reach the last phalanx; 9, the tendon of the Flexor longus pollicis passing between the two portions of the Flexor brevis to the last phalanx; 10, Abductor minimi digiti; 11, Flexor brevis minimi digiti, with the edge of the Adductor ossis metacarpi projecting beyond the inner border of it; 12, Pisiform bone; 13, First dorsal interosseous muscle, the abductor indices. The actions produced by these muscles are, 1, those of the wrist, in which there is but little movement between the bones in each range; but more is permitted between the two ranges, the motions of the latter being those of flexion and extension; 2, the movements of the metacarpal on the carpal bones, which are restricted to a slight degree of sliding motion, with the exception of the articulation of the metacarpal bone of the thumb with the trapezium, where the movements are flexion, extension, abduction, adduction, and circumduction; 4, the movements of the phalangeal joints, which are flexion and extension, the motions being more free between the first and second, than between the second and third.



We have thus endeavoured to explain some of the most remarkable peculiarities observable in the structure of the Hand, in which resides chiefly the sense of touch, that most delicate, and universal, and perhaps, useful of all the senses. Very truly and eloquently does Dr. Wilson, in his "Five Gateways of Knowledge," observe:—"In many respects the organ of touch as embodied in the Hand, is the most wonderful of the senses. The organs of the other senses are passive; the organ of touch alone is active. The eye, the ear, and the nostril stand simply open; light, sound, and fragrance enter, and we are compelled to see, to hear, and to smell; but the Hand selects what it shall touch, and touches what it pleases. It puts away from it the things which it hates, and beckons towards it the things which it desires; unlike the eye, which must often gaze transfixed at horrible sights, from which it cannot turn; and the ear, which cannot escape from the torture of discordant sounds; and the nostril, which cannot protect itself from hateful odours.

"Moreover, the Hand cares not only for its own wants, but when the other organs of the senses are rendered useless, takes their duties upon it. The Hand of the blind man goes with him as an eye through the streets, and safely threads for him all the devious way: it looks for him at the faces of his friends, and tells him whose kindly features are gazing on him; it peruses books for him, and quickens the long hours by its silent readings.

"It ministers as willingly to the deaf; and when the tongue is dumb and the ear stopped, its fingers speak eloquently to the eye, and enable it to discharge the unwonted office of a listener.

"The organs of all the other senses, also, even in their greatest perfection, are beholden to the Hand for the enhancement and the exaltation of their powers. It constructs for the eye a copy of itself, and thus gives it a telescope with which to range among the stars; and by another copy on a slightly different plan, furnishes it with a microscope, and introduces it into a new world of wonders. It constructs for the ear the instruments by which it is educated, and sounds them in its hearing till its powers are trained to the full. It plucks for the nostril the flower which it longs to smell, and distils for it the fragrance which it covets. As for the tongue, if it had not the Hand to serve it, it might abdicate its throne as the Lord of Taste. In short, the organ of touch is the minister of its sister senses, and, without any play of words, is the handmaid of them all.

"And if the Hand thus munificently serves the body, not less amply does it give expression to the genius and the wit, the courage and the affection, the will and the power of man. Put a sword into it, and it will fight for him; put a plough into it, and it will till for him; put a harp into it, and it will play for him; put a pencil into it, and it will paint for him; put a pen into it, and it will speak for him; plead for him, pray for him. What will it not do? What has it not done? A steam-engine is but a larger Hand, made to extend its powers by the little Hand of man! An electric telegraph is but a long pen for that little Hand to write with! All our huge cannons and other weapons of war, with which we so effectually slay our brethren, are only Cain's Hand made bigger, and stronger, and bloodier! What, moreover, is a ship, a railway, a lighthouse, or a palace.—what, indeed, is a whole city, a whole continent of cities, all the cities of the globe, nay, the very globe itself, in so far as man has changed it, but the work of that giant Hand, with which the human race, acting as one mighty man, has executed its will!

"When I think of all that man and woman's Hand has wrought, from the day when Eve put forth her erring Hand to pluck the fruit of the forbidden tree, to that dark hour when the pierced Hands of the Saviour of the world were nailed to the predicted tree of shame, and of all that human Hands have done of good and evil since, I lift up my Hand, and gaze upon it with wonder and awe. What an instrument for good it is! What an instrument for evil! and all the day long it never is idle. There is no implement which it cannot wield, and it should never in working hours be without one. We unwisely restrict the term handicraftsman, or handworker, to the more laborious callings; but it belongs to all honest, earnest men and women, and is a title which each should covet. For the queen's Hand there is the sceptre, and for the soldier's Hand the sword; for the carpenter's Hand the saw, and for the smith's Hand the hammer; for the farmer's Hand the plough; for the miner's Hand the spade; for the sailor's Hand the oar; for the painter's Hand the brush; for the sculptor's Hand the chisel; for the poet's Hand the pen; and for the woman's Hand the needle. If none of these or the like will fit us, the felon's chain should be round our wrist, and our Hand on the prisoner's crank. But for each willing man and woman there is a tool they may learn to handle; for all, there is the command, "Whatsoever thy Hand findeth to do, do it with all thy might."

Chiromancy or Palmistry (the former coming from the Greek *cheir*, the hand, and the latter having relation to the palm or soft part of the hand), are terms applied to the art or science, as its professors would call it, of deciphering a person's disposition by the lines naturally impressed upon the palm: not only can this be done, say some, but the future fate and fortune of the individual can be foretold by a study of these mystical lines; so that if one can but read them aright, he need be in no doubt as to the steps in life which it behoves him to take. But who can so read them? Pretenders to the art there have been in all ages, and there has been no want of credulous believers at any time; they exist even in this present enlightened age, and the palm of the brown-faced sybil is yet frequently crossed with the piece of silver which is to be the *open sesame* of her store of lying prophecies. Latterly, it has been, "Show me your writing, and I'll show you your character," and a specimen of one's style of caligraphy, *with a dozen postage-stamps*, has been sufficient: the guardian of the mysteries of the future no longer wears a red cloak and lives under the greenwood tree, but issues her sybilline leaves from some semi-fashionable quarter of London, and most likely wears crinoline and hoops, and a miscroscopic bonnet. We get into easy ways of reading difficult problems, and palmistry is no longer an occult science, but a very simple affair indeed. Still, joking apart, there may be something in it after all; we believe to a certain extent in Chiromancy; no doubt the general shape, and certainly the condition of the hand, will afford us some insight into the character and pursuits of the individual to whom it belongs. No doubt, also, that a person's handwriting may afford some clue as to his tastes and temperament, and perhaps his mode of life, but very little; there are so many modifying circumstances, that both hand and handwriting are very unsafe guides. A small white hand has ever been considered as an indication of gentlemanly birth and breeding, and among our aristocracy this feature of physical conformation is certainly the rule. In the present age, when the thinker rather than the smiter has taken the lead, the pen is a more delicate instrument than the sword, and the habitual use of the first does not develope the muscles like that of the second. Your thinkers and writers, and those who have little occasion to employ themselves in the laborious occupations of life, will, as a rule, be a smaller-handed race than your fighters and labourers. Here, for instance, is the hand of an intelligent man, a philosopher, whose work is all of a mental character.

Observe the regularity of its form, and the harmony of its lines. The disengagement of the thumb permits of its opposition to all the fingers; it runs in length to nearly the second joint of the forefinger. Extended, the fingers are all of different lengths, but close them upon the palm, or some round object, such as a cricket-ball, and they will appear equal. Thus the instrument is fitted for handling all tools and implements which human intelligence has moulded, but especially the finer and more delicate ones. It is, in sooth, a perfect piece of mechanism, and a beautiful object to look upon; the skin is fair and smooth, and there are but few lines in the palm; like the superior intelligence to which it pertains, it is neither empty nor broken. Now observe the next; it is the hand of an idiot. See how thick and clumsy is the form, and how deep the lines marked in it; the thumb cannot be extended far, in consequence of the callosities of the muscles: as incapable of grasping any object closely and firmly, especially if it be a fine object, as the brain of the idiot is of sustaining an idea.

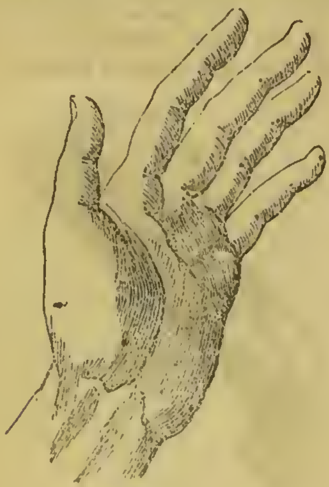


Fig. 1.

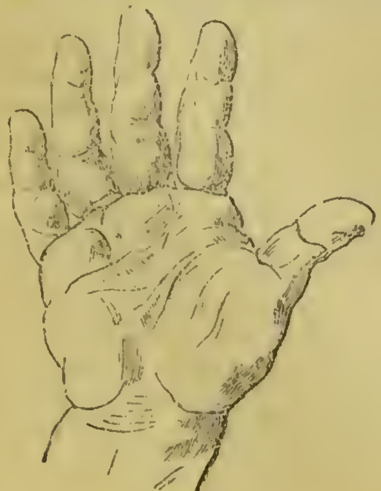


Fig. 2

We take, as our next illustration, the hand of a confirmed lunatic. In general conformation much like the last, it is covered with confused and irregular lines, which cross each other in every direction, like the vagaries of a diseased imagination. The clumsy thickness of the hand in both these last cases is very noticeable; it is like the blunted perceptions and faculties of the mind. The hand of a monomaniac, again, exhibits a striking similarity in outward conformation and general character to the two last instances.

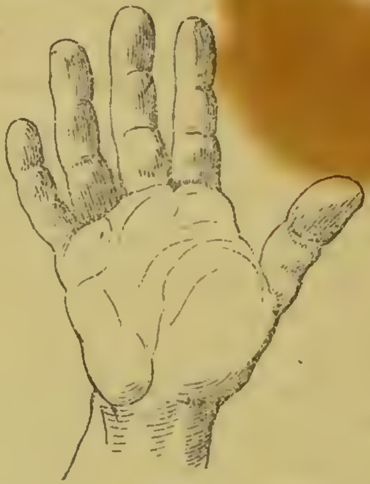


Fig. 3

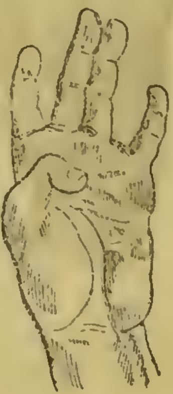


Fig. 4

In this case, the intelligence is not altogether obscured; but every faculty of the mind is concentrated upon one single object. The hand, we see, is traversed by one deep line—like the predominating idea—to which the fingers are as it were involuntarily reflected, as all the mental faculties turn to the subject of the mania. Here, however, we see none of the clumsy thickness on which we remarked in the former case. There is more delicacy of conformation, so, too, there is more acuteness of intellect; but the hand, like the mind, is abnormal and incomplete; both thumb and little finger is too short.

One who has speculated deeply upon this curious subject remarks that, "As nature has marked the intellectual gradations from the intelligent man to the idiot, so has she established, in the conformation of the hands of all men, infinite shades of distinction, which faithfully represent the innumerable shades of mental energy that distinguish the characters of mankind one from another. Between the first and second links of the animal chain—that is to say, between the intelligent man and the monkey tribe—nature has placed an intermediate race, whose forms resemble man, but whose savage instincts approach the inferior animals. This double similitude is pourtrayed in their hands. Here is a cast from the hand of a Bosjesman:—

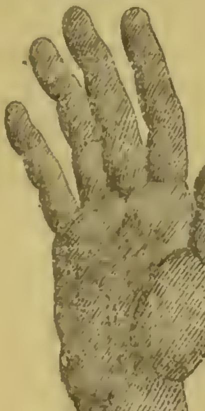


Fig. 5.

Compare it with that of a Chimpanzee further on, and the hand of a highly intellectual man (fig. 1). In the hands of the Bosjesman and Chimpanzee the thumbs are shorter than in the hands of an intellectual man. Observe, they barely reach to the first joints of the fore finger, an invariable sign of want of intelligence. The narrowness of these two hands also indicates an instinct of theft and rapine; yet the Bosjesman, being more nearly allied to the intelligent man than to the Chimpanzee, the hand of the former does not present the rude energy of the later, constructed to climb the loftiest trees of a tropical forest."

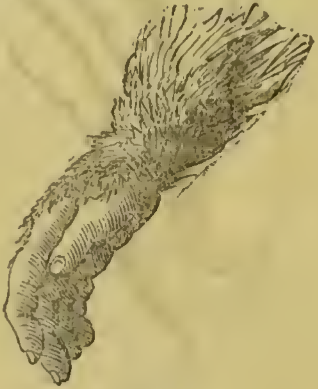


Fig 6.

We might follow out these speculations to a much greater extent, and show how the paws of those animals which use them as organs of prehension correspond in form with their habits, powers, and faculties; but all this would be apart from the main object of our work, from which it will perhaps be thought that we have already to some extent departed.

Quite in accordance, however, with this object, are the following remarks from the above-quoted authority, that "the intelligence, habits, instincts of all living creatures are not the only things portrayed in the organs of touch and prehension; the temperament and desires can also be read in them, and some physicians, from the form of the hand alone, can foretell consumption twenty years before the symptoms of disease appear in the lungs."

It must not be thought, from what is here said, that we believe with some professors of Chiromancy, that "all physiology, all psychology, and even pathology, is written in legible characters upon the human hand." We believe that it may sometimes serve as an index to mental characteristics, and also to states and conditions of the body; we know that it is often consulted by the physicians for other purposes than to ascertain whether the pulse be quick or slow, strong or weak; we know that a cold and clammy skin tells of a morbid condition of the excretions, and that a hot and dry one means fever; we know that the slender and semi-transparent hand indicates delicacy of constitution, likely to result in pulmonary diseases; and we know that the round fat hand, with stumpy fingers, gives warning of apoplexy; but we do not know, and do not believe, that from the hand or the handwriting can anything like a certain judgment be formed of the character or state of health of a person, although, by means of either, a shrewd guess may often be made.

On the injuries to which the hand is liable we have not thought it necessary to dwell here much, as under the several heads of *Dislocations*, *Fractures*, *Wounds*, and some others, both the diseases and hurts likely to affect this part of the body are described. See also *Fingers*, *Knuckles*, *Wrist*, *&c.*

Hanging. It sometimes occurs that non-professional persons are called on to strive for the recovery of one who has attempted self-destruction by this means, and therefore it behoves us to give some simple directions as to how they can best act in such a case. The first thing, of course, is to cut down the body, and loosen the cord, or whatever it may be, about the neck; then, as unless the brain is relieved of the congestion of the blood caused by the pressure and consequent stoppage of the circulation, there will be no chance of a recovery, an effort should be made to open the temporal artery, which is most large and prominent on the side of the temple, nearly in a right line with the top of the ear; it may be done with a sharp penknife; cold water should also be dashed in the face; and, if blood flows freely, there is a chance that efforts to inflate the lungs by the same means as those recommended under the head of *Drowning* (which see), may be eventually successful. Persons will do well to make themselves acquainted with the exact situation of the main branches of the temporal artery, as there are several cases of emergency in which this knowledge is useful; it can be easily obtained by passing the hand over their own temples, and feeling where it beats. In suspended animation from drowning, hanging, or suffocation, the exact situation of the artery cannot be ascertained in this way, as of course there is no pulsation.

Hare Lip (Latin, *leporina*). A congenital cleft or division of the lip, so called from its fancied resemblance to the divided lip of the hare. This is a malformation by no means uncommon in infants, who have the upper lip cleft at the furrow to a greater or less extent, the fissure sometimes extending through the roof of the mouth: it seems to arise from a defective union of the two halves of the body in the uterus. The fissure is generally single, that is on one side only of the central projection of the upper lip, but sometimes it is double, occuring on both sides, and in that case there is generally a want of some portions of the bony structure, including the central teeth of the upper jaw, there being probably nothing between the slits but a ridge of cartilage.

This is a surgical case for which no domestic treatment will avail, and the mother should not hesitate to have the necessary operation performed, in order that her child may avoid a permanent disfiguration: it is nearly always successful, if properly performed, and requires no great amount of skill in the operator; it consists, in single Hare-lip, in paring off, by means of a sharp curved knife, termed a bistoury, the edge of the divided lip on each side, taking care to remove all the hard skin, and then bringing the two new surfaces together so as to close up the cleft, and fixing them so by means of a couple of ligatures passed through the lip, or around the projecting ends of pins inserted in the lip. Considerable loss of blood often attends this operation, owing to the severance of the labial artery, but the ligature at the angles of the lip can be applied as to compress it and stop the bleeding. The blood should not be wiped off, but allowed to clot over the wound. The operation for double Hare-lip is more complicated and sometimes involves nice mechanical contrivance, into the particulars of which we need not enter. The operation for Hare-lip ought never to be performed prior to the period of dentition, and as a general rule the child should not be less than two years of age; and great care must be taken to keep its hands from the lip until the adhesion has taken place and the process of healing well advanced, as any displacement of the parts will occasion much trouble to the surgeon, and entail additional suffering on the child. See *Lips*.

Harmony (Greek *armonia*, a close joining). A kind of immoveable articulation of the bones, in which they fit closely together, like the pieces of the skull. See *Joints*, *Synarthrosis*.

Harrowgate Waters. These are of various kinds; some being pure chalybeates or weakly aperients, and others sulphuretted salines; the latter are the most useful and celebrated for the cure of cutaneous diseases, such as lepra, herpes, psoriasis; they are also beneficial in scrofula, scurvy, syphilis and piles, and for the relief of systems suffering under excess of the bile; their beneficial action is owing in a great measure to the presence of sulphuretted hydrogen, which acts as an excitant. In inflammatory diseases, and where there is a tendency to local congestion, these waters should not be administered without aperients, and then their action should be carefully watched. In skin diseases they are used both externally and internally.

HARTFELL WATER. This is the water of a chalybeate spring near Moffat, in Scotland; its most active ingredient is Sulphate of Iron.

HARTSHORN. A popular name for the Liquor of Ammonia, which was first procured from the horns of deer, but afterwards from bones and other animal matter; in the Pharmacopœia it is termed *Spiritus Cornu Cervi*, Spirit of the Horns of Deer. (See *Ammonia.*)

Black Hartshorn (*Cornu Ustum Nigrum*), is the impure residuum left in distilling horns for the spirit.

Red Hartshorn is a term sometimes applied to Lavender Drops. *Spiritus Lavendalæ Compositus.* (See *Lavender.*)

Hartshorn Shavings are sometimes boiled down to make a jelly, similar to that yielded by calves' feet and cow-heel; equal parts of this and cow's milk are recommended for children brought up by hand; it is a good nutrient, and may be added to the coffee, milk, &c., given to consumptive and otherwise debilitated patients.

HARVEST BUG. This is a variety of the Tick, called by naturalists *Acarus autumnalis.* It penetrates the skin of those who frequent the harvest fields, and causes intolerable itching, which is succeeded by shining ridges or weals, hence it is sometimes called *Weal-worm.* The best application is a lotion composed as follows:—Extract of Goulard, ½ an ounce; Diluted Acetic Acid, ½ an ounce; Rose, Elder Flower, or Distilled Water, ½ a pint. Wet rags to be kept applied. A little cooling aperient medicine should be taken to keep down any tendency to inflammation. If the pimples are pricked with a needle, the bug, which resembles a small red spider, may generally be extracted.

HASTY PUDDING. We give two receipts for making this (with some persons) favourite household dish:—Into a pint of boiling milk stir about a tablespoonful of flour, previously rubbed down with a little cold milk; sweeten with sugar, and serve hot: a little nutmeg may be added, if agreeable, or a few currants. For a baked pudding:—Into a pint of cold milk stir half a pound of flour, and boil, stirring it the while; let it stand until cold, then add two eggs previously beaten up; mix well with some sugar to sweeten, and any desirable spice, and put into cups and bake. These are good nourishing puddings, and not expensive; but they are too heavy for persons with weak digestive organs.

HAUSTUS (Latin *haurio*, to draw). A Draught. This is a quantity frequently ordered in prescriptions; it answers to three tablespoonsful, or 1½ ounces, or about three-quarters of a common wine glass. See *Apothecaries' Measures.*

HAWS. The well known red berries which adorn our hedges in the autumn, being the fruit of a species of *Cratægus*, belonging to the natural order *Pomaceæ.* I has several popular names, such as Haw or Whitethorn, and Service Tree. The berries yield, by fermentation, an acidulous drink, which is pleasant and cooling, but not otherwise medicinal.

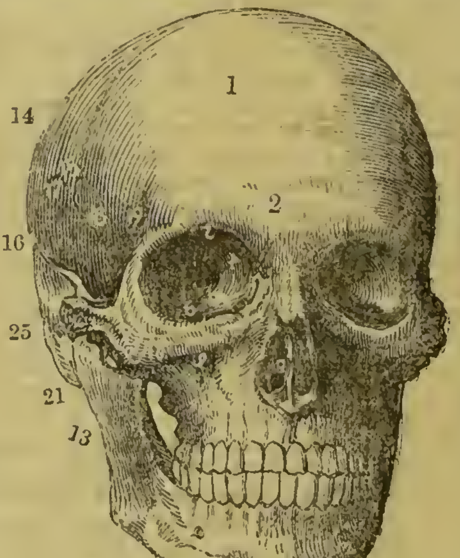
HAY-ASTHMA. Also called Hay-Fever, or Summer Bronchitis, is a disease which occurs about the time of the hay harvest, and appears to be caused by the pollen of some wild plants getting into and inflaming the bronchial passages. This theory is supported by the fact that those who live in situations where there is little or no vegetation do not suffer from it. A difficulty of breathing, and a burning sensation in the throat, are the chief characteristics of this affection, on which no remedies seem to exercise a curative effect; a removal to a different locality is most effectual.

HAZEL. The *Corylus Avellana*, or Nut

Tree, the typical plant of the natural order *Corylaceæ*, or *Cupuliferæ* as it is sometimes called. A cultivated variety of this species is the *Filbert* (which see).

HEAD. This is the upper or crowning part of the human frame, which is divided by anatomists into three principal divisions; the Head, the Trunk, and the Extremities: it is with the first only that we have to do at present, with regard to the anatomical structure of which we may say, that it consists of the Skull, or Cranium, and the Face; the former being, as it were, a case for the brain; it is composed of eight bones, connected together by sutures, or joinings, some having toothed or serrated margins, which fit into each other, some overlapping, and others interlacing; a structure marvellous at once for its strength and lightness. Between the interior and exterior wall of the frontal or forehead bone are what are called the frontal sinuses, two hollow chambers, which cause those bulgings above the upper edges of the orbits; and in the hollows beneath them, lie, sheltered and protected, the eyes. Behind each ear there is also a bony prominence to which the powerful muscles are affixed, which are distinctly seen in the neck, whose lower ends are fixed to the top of the breast bones; these latter appear intended to guard the entrance to the internal ear, which is placed wholly within the hollow of the temporal bones. At the base of the skull is a round hole of considerable size, through which the spinal cord, or marrow, passes from the vertebræ to the brain. On either side of this hole are two smooth prominences, called condyles which rest upon the tops of the uppermost vertebræ, and allow of a nodding motion to the head. Owing to the frequent modification by confluence, or joining together, of the human bones, it is difficult at all times to specify the exact number in any given part, and this is more especially the case in that part which we are now considering: collections of bones so united have received a kind of generic name, thus we say the *occipital*, the *temporal* bones, &c., and the constituents of these which have received no specific name, are defined as *processes:* thus we have the condyloid process of the occipital, and the styloid process of the temporal bone; we also sometimes speak of these aggregates of united bones as *portions*, for example the petrous portion of the temporal bones, &c. The classification, moreover, of the bones of the human Head, which some anatomists make into those of the cranium, and those of the face, is artificial, or special, and consequently defective. Many bones which essentially belong to the skull, are wholly omitted, in such an arrangement. Under the term *Skull* will be found a more minute account of the bones composing it; at present we will devote our attention more particularly to the general conformation of the Head, and its frontal developement or Face. When we come to speak of *Phrenology*, we shall treat more fully of the *form* and *size*, as indicative of character. *Teeth* too, will form a separate subject for discussion; of the *Brain* we have already spoken, and also of the *Eye* and the *Ear;* so that the ground before us is very much cleared, and the matter for immediate discourse simplified.

Of the Head, then, that lofty dome in which thought sits enthroned; the capital of the beautifully and marvellously constructed pillar which God has set up in the temple of his divinity, and illumined with the light of spiritual life and intelligence! Of the Head, the seat of sensation, and the home of intellect, we have to speak, but not so much in relation to its psychology, as its physiology. We have seen that the upper portion of it is the cranium, or brain-case, into whose delicate membranes and tissues, and reticulated net-work of nerves, and veins, and arteries, we have already penetrated. Let us therefore now confine our attention to the outside of the bony structure here represented.



This is the anterior or front view of the Head, as shown in the human skeleton. No. 1, is the frontal portion of the frontal bone; 2, marks the position of the nasal prominence, the hollow within which is shown, the cartilage which supports and forms the nose being mostly removed; 3, over the orbit refers to the supra-orbital ridge; 4 is the optic foramen; 5 and 6, the sphenoidal and the spheno-maxillary fissures; 7, lachrymal fossa in the lachrymal bone, where the nasal duct commences; 4, 5, 6, and 7 refer to parts within the orbit; 8 is the opening of the anterior nares, divided into two parts by the vomer, on which the cypher is placed; 9 is the infra-orbital foramen, 10, malar bone; 11, symphosis of lower jaw; 12, mental foramen; 13, ramus of lower jaw; 14, parietal bone; 15, coronal suture; 16, temporal bone; 17, squamous suture; 18, upper part of the great ala of the sphenoid bone; 19, commencement of the temporal ridge; 20, zygoma of the temporal bone, assisting to form the zygomatic arch; 21, mastoid process. It is thus that the anatomist Wilson describes and figures the front view of the Head, and in this case, as in many others throughout the work, we have given the scientific names of the various parts, because we are desirous that our readers should have an opportunity of becoming acquainted with these anatomical terms if they wished to do so. In all cases where the meaning of each is not appended, it will be found under the head occupied by the word in the alphabetical arrangement. In many cases, too, there is no other than the scientific name to give.

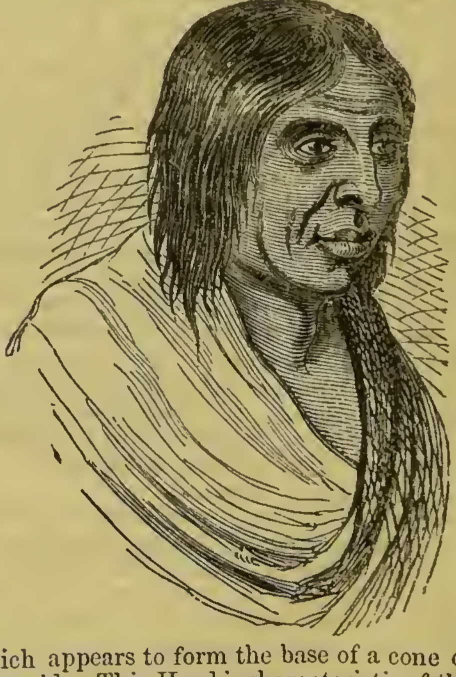
Here, then, we have the skull, that chamber of the soul, as it has been well termed, and of which more will be said under its proper head, presented to us as it was to *Hamlet*, when he exclaimed, "Alas, poor Yorick!" and moralised upon the fine intelligence that once dwelt in those now tenantless cavities. Who can look upon the broad expanse of the forehead without thinking of the busy brain which once thrilled, and throbbed, and vibrated to every sensation of the body, or emotion of the mind?—at those hollow orbits from which once flashed forth the light of intellect, the fire of anger, or beamed the gentle look of love and affection; and at which entered the luminous rays, bearing visions of the outer world to the inquiring soul within?—at the broken remains of that once finely chiselled and shapely organ, which once adorned the face, and stood like a vestibule to the great hall of the temple, through which perfumes, like messengers, were ever passing, as ministers of delight, or warners of danger; at those rows of gleaming teeth, without thinking of the friendly smile, and the ruby lips which once half hid and half displayed them, and contrasted so beautifully with their pearly whiteness? Where, now, is that organ of speech which once discoursed so eloquently, counselled so wisely, or admonished so kindly and affectionately? But we must not pause over such reflections as these. Let us clothe the naked skull, fill up the vacant spaces, and view the Head as we see it daily around us—as it is with toiling, rejoicing, sorrowing men, clothed and covered with skin and hair, provided with organs of most beautiful and complicated structure, and, like those of the rest of the body, well adapted to answer the necessary purpose of man's duplex nature—bodily and spiritual.

Without going at all deeply into the subject of the general formation of the Head as distinctive of race, or indicative of character, we may here make a few brief observations calculated, as we hope, to elucidate our present subject. There are three great groups of mankind which are especially distinguished by the shape of the Head. In the first group are included, as the celebrated ethnologist, Dr. Pritchard, tells us, all the people who are met with in the countries from the Himalayan mountains to the Indian Ocean, comprising all Hindostan, the Deccan, Persia, and Arabia. It also includes the countries of the north of Africa and the whole of Europe. The characteristics of this group are the *symmetrical* or *oval* form of the head, as here shown.

Here we see that the skull has projecting parietal bones, so that the head is rounder than in others. The upper jaw bones, and the zygomatic arches, are so placed in relation to each other, as to give the face an oval form. In these heads the forehead projects, and is on the same plane as the bones in the face, or, at any rate, there is no obvious projection of the lower parts of the face; the facial angle, as it is called, being greater in this group than in the others. There is no lateral or outward projection of the cheek bones; and the teeth are so placed in the upper and lower jaws, as to be almost perpendicular. In this group, the countenance is distinguished by smoothness and regularity of features, and an absence of prominence in any one part disproportionate to the other. The lips are small and compressed; the chin is full and prominent; and the whole face is of a regular oval form. It is amongst Europeans that this form of Head is met with in its most perfect development; and the ancient Greeks in their sculpture, have realized its most perfect form. Such heads, however, do not exist only in sculpture, as living specimens are constantly met with, equalling, in their proportions, those of the Greek artists; and Blumenbach has described a skull in his possession, which in its structure he regarded as being as perfect as any to be found among Greek statues. The face given as an example of this group, that of an Abyssinian, does not represent the most perfect type. In the second group, which includes the Negroes, the Alfourous, the Papuans, the New Zealanders, and Australians; we have the Head *narrow* and *elongated.*

When these heads are examined, they give the idea of having been compressed on each side. The zygomatic processes do not project laterally, but forwards. The cheekbones and upper jaw project forward, not outward; and the teeth are not vertical, having an oblique direction in the jaws. The facial angle has its lowest development in this form of Head; the countenance is the least pleasant of that of any group. The projection of the bones constituting the lower parts of the face gives to the expression an animal and somewhat ferocious character. The forehead also retires in these races; the lips are thick and protruding; the nose is not proportionably developed, the upper part being compressed, and the nostrils wide and expanded. Such are some of the features which belong to the narrow and elongated Heads—by common consent the least beautiful form of any belonging to the human race. Our representative of this group is an Australian.

The third variety of Heads is called the *square*, *broad-faced*, or *pyramidal;* it is shaped like the last, as far as the back of it is concerned; but it differs in the excessive outward tendency of the bones of the face, which appears to form the base of a cone or pyramid. This Head is characteristic of the Mongolian race (one of which we give as an example). It embraces the Esquimaux, th



Aborigines of America, the Hottentots, the Finnish nations of Europe, the Chinese, the Indo-Chinese, the Tungusians, Japanese, part of the Tartar races, and others of the Northern Asiatic nations. The peculiarities of this kind of Head are caused by the projection of the zygomatic processes and cheek-bones on each side, giving great breadth to the face. The sockets of the eyes are generally large and deep; whilst the bones of the nose, and the space between the eye-brows, are on a level with the bones of the cheek. The countenances altogether differ from those of the second group, in projecting less, and in their greater width from one cheek to the other. Here we observe a curious obliquity of the eye, quite peculiar to this form of Head; the nose is depressed; the lips are not so large as in the second class, nor compressed, as in the first; the chin is shorter than in either.

Injuries to the Head. These we shall briefly consider, not so much as affecting the brain, which has already been spoken of, but as affecting the parts which enclose the brain, or lie immediately contiguous to it; and to these, in most cases, but a passing allusion will be required, with a reference to the heads under which they are more fully described. Among the most common of these injuries are bruises and superficial wounds of the *Scalp* (which see). Sometimes, in the former, a vessel may burst without the outer skin being broken; and the consequence will probably be a copious effusion of blood, which raises up the scalp from the skull, and feels, at first, like a fluctuating tumour; the whole upper part of the Head swelling rapidly. Scarcely anything is required, in this case, but cold lotions to the Head; the blood will probably be absorbed, and there will be no necessity for an incision to let it out. Sometimes, however, when the vessels of the dura mater are ruptured by a jar, and blood accumulates between it and the skull, it threatens compression of the brain; in this case, the patient should be bled freely, if his system will bear it, and, if this does not mitigate, the symptoms, it is best to apply the trephine, wherever blood is likely to be found in the Head, and let it escape.

If instead of blood, purulent matter collects between the dura mater and the skull, it is likely to lead to equally fatal results. In this case there is headache, restlessness, and extreme langour; the patient cannot sleep, he has a quick hard pulse, and if the symptoms are not quickly relieved, convulsions, delirium, insensibility, and probably paralysis is likely to ensue, and, finally, death. The treatment here must be the same as in the former case; trepanning, to make a way for the escape of the pus; an avoidance of stimulants, which might produce inflammation, before the operation; a generous dietary to support the system.

Superficial wounds in the Head merely require the hair to be cut or shaved off, and the edges of the wound brought together by means of sticking plaister, and the part kept cool by layers of lint, dipped in cold water and placed over it. A not uncommon consequence of deeper wounds in the head, and especially punctured ones, is inflammation, and consequent suppuration, in the loose tissue that connects the tendon of the muscle with the pericranium; when this is suspected to be coming on, apply leeches in large numbers about the wound, and cold lotions; when matter is formed, make free incisions to let it out, and treat the same as any other abscess. A frequent result of injuries of the scalp is *Erysipelas* of the whole head and face (see that subject).

HEADACHE. There is no more common complaint than this, which is symptomatic of so many different diseases, that it is impossible to lay down any general system of treatment; we will, therefore, proceed to enumerate some of the chief kinds of Headache; and, as we do so, make some allusion to *symptoms* and *remedies*.

We place first *Bilious*, or *Sick Headache*, because it is perhaps the most common of any. It generally comes on the first thing in the morning, and may often be relieved by a hot cup of strong tea or coffee; probably because this stimulates the digestive organs, from a defective action of which the pain proceeds. This pain commences usually at one side of the head, most likely on the brow, just over the right or left eye, but when it continues it is diffused over the whole head, and is accompanied by an intolerable feeling of sickness, often by vomiting, and extreme langour and depression of spirits; there is generally, also, singing in the ears, dimness of sight, and confusion of mind, with great restlessness. Sometimes, without any medicine being taken, the bowels, which have been previously constipated, will be freely evacuated, and the most urgent symptoms are quickly relieved; but it is generally desirable to take some active aperient, preceeding, or accompanying it, with a mercurial: a 5 grain Blue Pill at bed time, and a Black Draught in the morning, will generally prove effectual, especially if the diet is spare and simple; take no solid food for 24 hours, only a cup or two of tea, or a little thin gruel, and the chances are that there will be no Headache the next day; although it will probably return as severe as ever in a few weeks, its recurrence in some cases being at almost regular periods. It can generally be traced to some error in diet, such as taking food that is indigestible, or in too large quantities; or stimulating drinks, with insufficient exercise. Very often it arises from some derangement of the biliary secretions, either as to quantity or quality, or defective assimilation; sometimes from the habitual abuse of purgatives, which enfeebles the tone of the alimentary canal. "Under these latter circumstances it is," as Dr. Elliott observes, "a most intractable complaint." Very commonly a simple dose of Rhubarb and Magnesia, with about 30 drops of Sal Volatile, will remove a common Sick Headache; but when there is nausea, and vomiting or purging does not come spontaneously to remove it, the former should be excited by an emetic, composed of 1 grain of Tartarized Antimony and 20 of Ipecacuanha, and after this has acted, a Rhubarb and Blue Pill. Persons subject to this kind of Headache, should carefully abstain from fat meats, pastry, butter, and rich food generally. See *Bile*.

That which we have just been describing is one of the forms of *Sympathetic Headache*, sympathy with a disordered stomach being the immediate cause; sometimes an excess of alkali, at others of acid in the alimentary canal will produce this: in the former case, a vegetable acid, such as Vinegar, will afford relief; in the latter case, in which there is likely to be heartburn and acid eructations, a dose of Sal Volatile, or of Carbonate of Soda, or Potash, will be the best remedy. In all these cases, it seems likely that the blood circulating in the brain is both mechanically and chemically affected by the defective action of the assimilative and secretive organs of the stomach. We sometimes find that the postponement of the customary evacuation of the bowels, for ever so short a time, will cause a Sympathetic Headache, and that this will be relieved directly the evacuation has taken place; a clear proof of the intimate connection there is between the head and the stomach.

We may next speak of a class which may be called *Congestive Headaches*, because they proceed from a congested state of the vessels of the brain; arising either from an overfulness of blood, or a weakness of the organ, or from an excessive nervous irritability, which frequently upsets the balance of the circulation. Whichever of these may be the case, there is nearly always a dull pain over the whole of the head, which is worst at the fore and hind parts. When it arises from an over-loaded condition of the vessels, there is usually a bloated countenance, with full red eyes, and a dull inanimate expression; here we find, on inquiry, a sluggish liver, and inflammation of the brain, tending to apoplexy or paralysis.

Leeches to the temples, or cupping on the back of the neck; cold applications to the head, with spare diet, mercurials and active aperients, will be the proper treatment. (See *Brain*, *Congestion*).

A weak brain is generally a consequence of some long standing discharge which has debilitated the whole system, and in this condition of things, if from any cause there is a more than common flow of blood to the brain, there will be Head-ache, with a pale, sallow countenance, and a languid pulse; frequently swelled feet, excessive fatigue on the slightest exertion, with palpitation of the heart, and increase of the pain in the head. Here measures of depletion would be improper; we must soothe and sustain by means of sedatives and tonics, such as Conium and Quinine, either in the form of pills or mixture, as follows:—Take of Extract of Conium, 24 grains; Sulphate of Quinine, 12 grains; make into 12 pills, and give 1 three times a-day: or Sulphate of Quinine, 12 grains; Sulphuric Acid, diluted, 12 minims; Tincture of Conium, 2 drachms; Infusion of Gentian, 6 ounces; take a table-spoonful three times a-day. Good nourishing food will be required in this case, and stimulants, such as Ale and Wine, in moderation. Where the Headache proceeds from nervous irritability, the mode of treatment must also be soothing and strengthening; but in this case we must avoid stimulants as much as possible; tonics are best here, with plenty of fresh air and exercise, and all that tends to invigorate the frame. A course of hydropathic treatment will generally be found effectual. (See *Debility*, *Hydropathy*).

Rheumatic Head-ache is commonly caused by exposure to cold, especially a draught of air; the pain is chiefly confined to the back and front of the head, and is felt most at night when the patient is warm in bed: it is a remittent, shifting pain, shooting from point to point, following the downward course of the jaw, whose muscles are commonly implicated; (for treatment see *Rheumatism*).

Periodic Head-ache, *Brow-ache*, *Brow-ague*, or *Neuralgia of the Head*, as it is variously called, is an intermitting pain, which comes on at periods more or less regular, and is confined to the brow. It will nearly always yield to full doses of Quinine, especially if combined with Conium. (See *Brow-ague*, *Hemicrania*, *Neuralgia*).

Organic Head-ache, resulting from actual disease of the Head itself, is rare, and when it does occur, only a palliative mode of treatment can be adopted: sedatives, such as Opium and Conium may, for a time, relieve the almost intolerable anguish, but they will not touch the disease itself.

We have now adverted to the *Bilious* or *Sick Head-ache*, sometimes called the *Sympathetic* or *Dyspeptic;* also to the *Congestive*, the *Rheumatic*, the *Periodic*, and the *Organic Head-aches*, these being the principal classes into which *Cephalagia*, as it is sometimes called, can be divided. Let us in conclusion enumerate the distinct and specific *causes* to which pain in the Head may be assigned:—Rheumatic Inflammation of the Pericranium, or of the Mucous Membrane of the Frontal Sinus; Mental excitement; Strong or long continued impressions upon the senses of Hearing, Sight, or Smell; Excessive Impetus of Blood to the Head; Impeded return of the same; Congestion or Inflammation of the Brain; Suppression of Bile, Perspiration, Urine, &c.; Organic Disease of the Head; Sympathy with the Stomach, and Constipation; Frequent use of Narcotics or Stimulants; Intestinal Worms; Changes in the Atmosphere, and Neuralgia.

HEALTH. This is a word of Saxon origin, signifying, as our readers are aware, freedom from bodily pain or sickness. This is a blessing which few enjoy in an unimpaired state, in this highly artificial condition of things; and when we say that a person is healthy, we must be understood to mean comparatively rather than positively so. Latterly the term *normal* has been much used in scientific writings to signify a natural or good state of Health; but in this signification we might as well keep to the good old Saxon term, *helth*, which is but another form of *heal*, as it expresses the same thing equally well, indeed better.

"Though health may be enjoyed without gratitude, it cannot be sported with without loss, nor regained by courage," says a great writer; and truly it were well if men kept this saying in mind, for there is scarcely any earthly blessing they hold so lightly, nor deplore so deeply the loss of. What, we may ask, is a state of perfect Health? If a man eat well, and sleep well, and perform his allotted duties with ease and comfort; if there is a proper performance of all his bodily functions, so that he is not made aware by any unpleasant sensation or pain, or feeling of languor and debility, that matters within him are not as they should be; if his step is light, and his laugh sonorous and hearty, and his manners easy and cheerful, and he makes no complaint of the changes of the weather, and so forth, we should pronounce him a healthy man, and be ready to insure his life for any amount. But who can tell what latent diseases, what hereditary predispositions, are lurking within, waiting for some exciting cause to call them into activity? How often do we see the man of apparently robust health struck down by some accident or morbific influence, so often, as to convince us that our tenure of Health is, indeed, very uncertain; and to induce us, if we be wise, duly to value and to care for such an inestimable blessing. Few there are, however, who do this; therefore is there a constant and ever increasing demand for the services of medical men, and therefore are such works as we are now writing, books of universal utility and constant reference. It is not our purpose here to enter at all into the physiology of Health and Disease; we have already spoken on the latter subject under its proper head, and the whole scope and tendency of all that we have written in these pages is for the preservation of the first, and the avoidance or cure of the last. Wholesome diet, moderately enjoyed, personal cleanliness, regular exercise, pure air, and an avoidance of undue mental excitement and bodily excesses—these are the grand preservatives of Health. Inherited diseases cannot be guarded against, nor can accidents, nor the contraction of contagious or infectious diseases—these are the bodily ills to which the flesh is certainly heir, but these form a very small proportion of the ills that do afflict humanity; and it is a reproach alike to the common sense and the religious character of this so-called enlightened age that Health should be squandered as it is. If we really wish, as we pray, to have "a sound mind in a sound body," let us strive to preserve the body sound when we have it so; for, without it, the mind is scarcely likely to be really healthful.

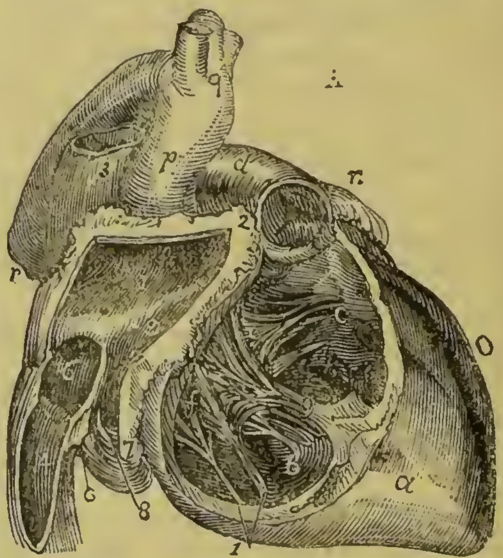
HEARING. This word has probably a Saxo origin, although we trace something like it in the Greek *horeo;* it signifies the faculty or sense by which sound is perceived; it is reckoned among our external senses, its particular organ being the *Ear;* in our article on which we have explained how certain motions or vibrations of the air, striking upon the tympanum, or drum, so excite the auditory nerve, whose fine reticulations, or febrillæ are spread over the interior of the organs, as to cause them to communicate to the brain, a sensation by which the mind obtains the ideas awakened by the sounds. All this is very wonderful, and past human comprehension; we know that it is so, but we cannot tell how this communication between mind and matter can take place; we see the machinery of the organs, and we are cognizant by certain results of its being put into operation. We know that if we utter certain words in the ear of a friend or a foe, the thoughts or ideas which we intended those words should convey, are conveyed to his mind, and he speaks and acts accordingly; but our chain of reasoning upon cause and effect wants some links to make it complete. We are sure that we do *hear* and are *heard*, but we cannot tell *how* this hearing is effected. It is one of the mysteries of our being, and there are many such to teach us humility and our dependence upon God. For remarks on the causes of the deprivation of Hearing and the means of its recovery. See *Deafness*, *Diseases of the Ear*.

HEART (Latin, *cor*, *cordis*). This is the great central organ of circulation; its form is that of an irregular cone, having its base directed backward towards the spine, and its point forward and downward towards the left side; so that at each contraction it may be felt striking between the fifth and sixth ribs, about four inches from the medium line. In this position it rests upon the diaphragm, having the surface on which it lies much flattened. On its right side, it is firmly attached to the diaphragm, which, it should be remembered, is the muscular partition between the chest and abdomen; and behind, by the *vena cava*, or trunk vein which passes through the diaphragm Behind and above, the Heart is also attached, although somewhat loosely, to the upper and back part of the chest, by the vessels which there pass out of the pericardium, or membraneous bag in which the Heart is perfectly enclosed, although it is sufficiently loose to allow of free motion. In a healthy state, the pericardium is lined with what is called the serous membrane, which is smooth and moist, and constitutes its inner coat or layer, the outer one being fibrous; this membrane is also reflected, so as to give the Heart two coverings, which, at every motion of the organ, glide smoothly over each other, and thus prevent friction.

The Heart may be popularly described as a hollow muscle, having four cavities, two on each side; its action is that of a kind of double pump, intended to carry on the two-fold circulation, viz., through the body, and through the lungs; the auricle and ventricle, on the left side, being devoted to the former, and those on the right to the latter. Between the cavities on one side, and those on the other, there is no natural communication, but each auricle is connected with its corresponding ventricle, by a valve which only opens by pressure on one side, so that the blood cannot pass except in the right direction; any attempt to return being instantly resisted by the closing of the bag-like valves; should these become diseased, so that they perform their office imperfectly, there will be regurgitation, or passing back of the blood, and that occasions serious derangement of the balance of circulation, resulting in organic disease. These valves, which are also placed where the blood vessels enter the different cavities of the Heart, consist of membraneous folds, and are, according to their form, either *sigmoid or semilunar*. (See *Valves*).

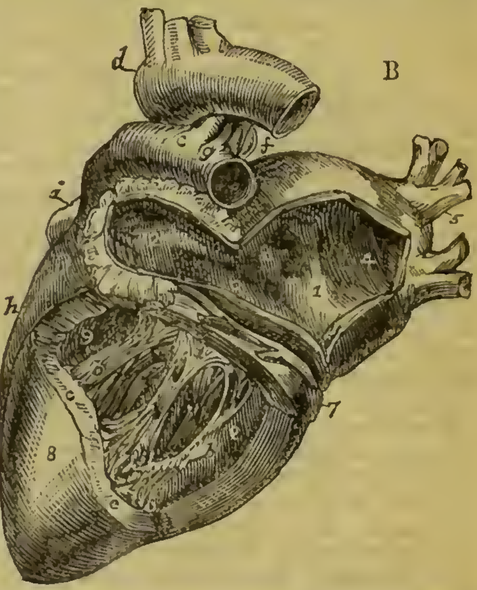
The regurgitation of blood into the lungs, or other parts of the body, is not an unfrequent cause of *Hæmorrhage* or *Dropsy* (which see).

We would now invite the attention of our readers to a couple of diagrams, in which are exhibited the anatomy of the Heart: like many others, in this book, they are from Wilson, than whom we can cite no better authority. Diagram A, represents the anatomy of the right side: — 1 is the cavity of the right auricle, with a smaller hollow, called the *Appendix auriculæ* (2), in which is seen the *Musculi pectinati*, which are small muscular columns, arranged in parallel lines, some-

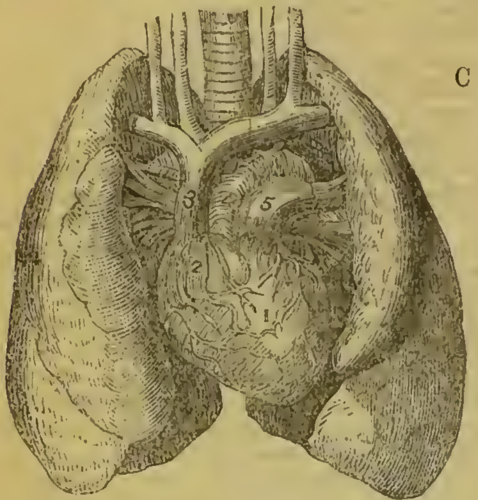


thing like the teeth of a comb, and are thence called pectinated, or toothed; 3, is the superior portion of the *vena cava*, which returns the blood from the upper half of the body, and opens into the upper and back part of the auricle; 4 is the inferior part of the *vena cava*, by which the blood from the lower half of the body is returned, and this opens into the auricle, through the lower and hinder wall; 5 is the *fossa ovalis*, an oval depression, surrounded by a prominent ridge, called the *annulus ovalis*, this is the rounded margin of the septum, and occupies the place of the *foramen ovale*, which formed the communication between the right and left auricle in the fœtus; 6 is the *Eustachian valve*, which is also a part of the apparatus of fœtal circulation, but in the adult is a mere vestige and fragment; 7 is the opening of the *Coronary vein*, across the mouth of which is stretched the *Coronary valve* (8), which prevents the reflux of blood in the veins during the contraction of the auricle; the *Coronary*, or, as they are sometimes called, *Cardiac veins*, return the blood from the substance of the Heart itself; 9 marks the opening, or valve, between the auricle and ventricle; and between 1 and 9 are to be seen two or three *Foramina Thebesii*, which are minute, pore-like openings of small veins, which open directly from the muscular structure of the Heart, without entering into the venous current at all. Now, to distinguish the internal from the external portion of the Heart, we will use letters for the other references:—*a* then, is the right ventricle, whose cavity is marked by *b c*, on the walls of which are bundles of muscles called *Columnæ carneæ; c* marks the channel leading to the pulmonary artery (*d*); and *e f* is the *Tricuspid valve*, *e* being placed on the anterior curtain, *f* on the right curtain; *g* is the long *Columna carneæ*, to the apex of which the anterior and right curtains are connected by the *Chordæ tendineæ*, or tendonous strings which connect the *Carneæ columnæ* of the Heart with the auricular valves; *h* is the long moderator band, and *i*, the *Columnæ carneæ* of the right curtain; *k* is the attachment by *Chordæ tendineæ* to the left limb of the anterior curtains; and *l l*, the same tendons of the fixed curtain of the valve; *m* is the valve of the pulmonary artery, through which, and the aorta, the whole arterial system is fed; *n* is the apex of the left *Appendix auriculæ; o*, left ventricle; *p*, the ascending aorta; *q*, its transverse portion, with the three arterial trunks which run from the heart; *r* is the descending aorta.

In diagram B we have the anatomy of the right side exhibited: fig. 1 is the cavity of the left auricle, and 2 that of the *Appendix auriculæ*, near the apex of which are seen the *Musculi pectinati;* 3 is the common opening of the two right pulmonary veins; 4, the sinus, into which the left pulmonary veins open; these veins are marked by 5; and the valvular communication between the left auricle and ventricle by 6; the coronary vein, lying in the groove of this opening, is 7; and 8 is the left ventricle, whose cavity is 9. Then, of the letters, *a* points out the position of the mitral valve, so called from its resemblance to a mitre; *b b*, *Columnæ carneæ; c c*, the same fixed, and forming part of the internal surface of the ventricle; *d*, arch of the aorta, from the summit of which the three arterial trunks of the head and upper extremities arise; *e*, pulmonary artery; *f*, obliterated *Ductus arteriosus*, another fragment of fœtal circulation; *g*, left pulmonary artery; *h*, right ventricle; *i*, point of the appendix of right auricle.



It will, perhaps, conduce to the better understanding of all this if we enter a little more fully into explanation, and give another diagram (C), which exhibits the Heart more in its relations to the surrounding parts. Let it be understood that the two large lobes on either side are the lungs; 1 is the Heart itself; receiving into its right auricle (2) the blood from the *Vena cava* (3): this is the *venous* circulation, which has gone through the system, and is on its way back to the lungs to be reoxygenized; opposite to this, or on the left side, is the left auricle, into which the purified blood passes through the ventricle, and is pumped out into the aorta (4) and pulmonary artery (5); these are the main channels of the *arterial* circulation. The contraction of the auricle to force out the blood is called *systole*, and that of the ventricle *diastole*. At the root of each of the above-named arteries are three valves, which are like membraneous bags, so arranged that when there is any regurgitation, they assume the appearance represented by the annexed cut. 6 in the diagram marks the aperture, or large passage, through which the air inhaled passes into the spongy texture of the lungs; and 7 7 are the trunks of arteries and veins which supply the head.



It was the opinion of Harvey that the Heart was the sole agent by which the circulation was effected; but we now know that there are several other agents that exercise, at least, auxiliary powers. There is no doubt, however, that the Heart has a marked influence upon all parts of the circulation: thus, in the large arteries, we may note that the increase of the current, set in motion, exactly corresponds with the contraction of the ventricles; and this is observed also in the smaller arteries at an interval scarcely appreciable: in the capillaries even, there is an occasional pulsatile motion to be seen in the transparent parts of an animal, by means of a microscope, after a bleeding, when the Heart is beating very faintly. In the veins, also, we find this influence exerted. If the main artery and vein of a limb be exposed and isolated, and an opening made in the latter, the flow of blood may be regulated pretty exactly by compressing the artery, and thus, as it were, cutting off from the vein the supply given to it by the impulse of the Heart, whence we may likewise note, that it not only by its contraction propels the blood, but in its expansion it acts as a sucker to draw it up, so that it is at once both a sucking and a forcing pump; and such is the power of its action that the whole mass of the circulation, about 28 pounds, goes through the system in the space of three minutes. More of this will be explained as we proceed to speak of

Diseases of the Heart. These may be divided into—1st, Functional or Nervous; and 2nd, Structural, or Organic. Chief among the former we have *Palpitation*, *Syncope* or *Fainting*, and *Angina Pectoris* (which see). In a structure so complex, and formed of such different tissues as the Heart is, one might expect that it would be subject to many diseases of both a general and a partial character; and, accordingly, we find there are few persons who have not had to complain of symptoms which were indicative of Heart affection of some kind, although few, perhaps, really have what may be properly called Heart *disease*. Strong emotions of the mind, derangements of the liver or stomach, will often cause flutterings and palpitations, an increase or decrease of arterial action, and other symptoms, which would seem to indicate that there was something very wrong with the great organ and centre of circulation; but these symptoms, in the great majority of cases, are merely sympathetic; and very commonly, when a person is said to die of "a broken Heart," there is no organic disease to justify the popular verdict.

Among the principal organic diseases to which the Heart is subject, we may notice first, *Pericarditis*, or *Inflammation of the Pericardium*, which may be induced by exposure to damp and cold, and other causes which affect the serous membranes of the body generally. The *symptoms* are tenderness over the region of the Heart, amounting, when pressure is made, to sharp, cutting pains, so that the patient cannot lie on the left side; most commonly the pleura, or investing membrane of the lungs, is involved in the mischief, and in this case, there will be acute pain, on coughing or drawing a deep breath; sometimes, however, there is little or no acute pain, only a sense of heaviness and oppression: generally the pulsations are accelerated, often so much so as to constitute flutterings or palpitation; they may be regular or intermittent; although it is not easy to feel this, if, as is frequently the case, there is much effusion into the pericardium; this may be detected by the bulging out of the skin of the thorax over the seat of disease: of the nature of the effusion—whether it be merely thin bloody serum, or thick with coagulated lymph, or fibrous, or containing cartilaginous or osseous deposits—can only be determined by auscultation employed by a skilful person. Pericarditis is one of the most frequent and worst features of acute *Rheumatism* (which see).

Carditis, or Inflammation of the Heart sometimes occurs, and here, although the principal seat of mischief is the muscular tissue of the organ itself, yet its investing membrane is generally implicated more or less, and the same *symptoms* are presented as those just described, although it is likely to be in an aggravated degree. It would be useless to prescribe any general plan of *treatment* in these cases, as this must depend very much upon the peculiarities which they present, and the temperament and condition of the patient. Of course, if inflammation is quite apparent, low diet and aperients must be the rule; leeches may be applied over the cardiac region, if there is much pain, and especially if accompanied by a pricking or burning sensation; but the lancet should never be used, except by the medical man, who alone can judge of its propriety. Perfect rest, and an avoidance of all excitement, should always be enjoined in this and other cases of Heart disease.

Endocarditis, or Inflammation of the lining membrane of the Heart, is commonly an attendant of the two former diseases, or of inflammation of the internal coat of one or more of the principal veins: its chief symptoms are fever and anxiety, with bulging of the præcordial region; it requires, like the others, as a rule, rest and antiphlogistic treatment.

Atrophy of the Heart sometimes accompanies a state of general debility; it is a consequence of a deficiency in the supply of blood, and will be pretty sure to terminate in death.

Hypertrophy of the Heart, is the result of an excess of nutrition; the nutritive process here appears to go on more rapidly than the absorbent. Fresh matter is deposited before the old is removed, and hence there is an increase in bulk, which interferes with the proper performance of the *organic* functions. Hearts have been known to increase in this way to more than double their proper size and weight. Hypertrophy is usually divided into three kinds: viz. *simple; eccentric*, or *aneurismal;* and *concentric;* the first is the least common, in this the *parietes*, or divisions, are thickened, without any diminution in the capacity of the cavities; the second, most frequent, has the parietes thickened, and the cavity proportionably enlarged; the third, has the cavity diminished, in proportion to the thickening of the walls. Any one of these forms of Hypertrophy may affect a single cavity, or the whole Heart. If the left ventricle is attacked, apoplexy and hæmorrhages sometimes ensue. In this disease, the pulsations are for the most part regular and strong, often visibly raising the bed clothes; the chest is bulged out on the left side, and the sound on percussion dull. Rest, abstinence, sedative medicines, and more or less depletion, according to the circumstances of the case, are the proper remedial measures. It is only by perseverance in this course that any good can be looked for.

Dilation of the Heart, is sometimes caused by excessive exertion and strong excitements of any kind; in this case it would seem to be the result of increased action. The whole substance of the organ, or one or more of the cavities, or smaller orifices may be dilated, the walls being merely extended without any increase of substance. In this case the muscular parietes being thinned and feeble, there will be a want of vigour in the circulation, the muscular compression and extension will be weak and irregular, and the valvular action incomplete, so that the blood will frequently escape out of its proper channels, and these hæmorrhages, although trifling in themselves, will so reduce the patient, that he will, probably, be carried off by one of them. Abstinence from the exciting causes of the disease; rest, and nourishing diet, with strict attention to the general state of the health, are the means to be taken in this case.

Disease of the Valves, so commonly follows Endocarditis, if of long continuance, that it may almost be considered as a chronic form of that disease; it is a thicking of the internal lining of the Heart, especially at the valves; it becomes not merely thickened uniformly, but is the seat of warty excrescences, and even cartilaginous and osseous formations of considerable size, extending into the cavities of the Heart. In old persons, and especially those addicted to a generous mode of living, we most frequently meet with ossification, the effects of which are sanguineous and serous congestion, difficulty of breathing, apoplectic seizures, and other symptoms of embarrassed circulation.

Ruptures of the Heart sometimes occur, not only, in the valves, and columns of muscular fibres, but also in the parieties. The effect will depend upon the extent and situation; if a valve, or one of the muscular fasciculi, be broken through, serious derangement of the circulation takes place; it sometimes, although not often, happens that one of the walls of a large cavity is so injured, as to allow of an escape of blood into the pericardium; in this case, death is the inevitable and almost instant consequence.

Hydrothorax or *Dropsy of the Heart;* this is a collection of fluid in the cavity of the chest, or the pericardium; it is never an idiopathic disease, but is consequent on some previous disorder of the viscera of the chest, it may be of the Heart or lungs, or their investing membrane, the pericardium or pleura. It is characterized by great difficulty of breathing, especially after exertion, and when the body is in a horizontal position, with great weight and appression at the chest; pallid purpleish countenance, with an anxious expression, and the usual *symptoms* of *Dropsy* (which see for *treatment*).

Opening of the Foramen. It sometimes happens that the *Foramen ovale*, which leads from the right to the left auricle of the Heart, is improperly closed at the time of birth; and a permanent aperture is the consequence; through this the venous blood passes in greater or less proportion, according to the extent of the opening into the left side of the heart, and is there mixed with the red arterial blood which circulates through the system; the consequence of this is a deterioration in the quality of the vital fluid; the outward *symptoms* are a blueness of the skin, lips, and nails, a low temperature of the body, and an unhealthy state altogether. There is shortness of breath, palpitations, faintings, a feeling of suffocation, and a liability to hæmorrhage, attended by great loss of strength. We call this, from the colour of the skin, Blue disease, in Latin *Morbus cœruleus*, also *Cyanosis* (which see).

We have now to speak of the Nervous or *Symptomatic* affections of the Heart, which we meet with chiefly in women who are suffering from anæmia, chlorosis, hysteria, &c.; and in men of a quick, irritable temperament naturally, or rendered so by a free use of stimuli; or an unrestrained indulgence of the passions, and irregularities which seriously interfere with the working of that delicate piece of machinery which we have been attempting to describe, and whose stoppage must cause instant death.

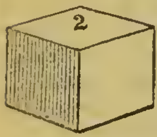
Displacement of the Heart (called *Ectopia cordis*, from the Greek *oktopiki* to displace), sometimes takes place; it is generally congenital, but is sometimes a consequence of effused fluid, or of its subsequent absorption. Cases are on record where this organ has occupied the right side of the chest, the lungs and other organs presenting a relative change of position without any disturbance of their functions. It has also been found pushed out of the left into the right side by tumours, or extensive effusion of fluid into the pleura; this latter is the more common occurrence.

Palpitation of the Heart has been experienced by most persons who have run themselves out of breath, or by any violent exertion, caused a great increase of action in the respiratory and circulatory organs. In a healthy and proper state, we are not generally sensible of the regular *beat, beat* of the pulse, which goes on night and day, whether we sleep or wake, and tells that the great organ of vitality is duly performing its office; but when, from any cause, these beats become unusually frequent and forcible, we both feel and hear them, in a very troublesome and distressing manner; and especially is this the case when the bodily strength has been reduced, and the nervous sensibility increased by illness; then we seem to feel within us the swing of a great pendulum, and the "*throb! throb!*" vibrates through the chambers of the brain, and appears to call forth echoes from every cavity and passage of our internal structure, in a manner that is perfectly agonizing. Sometimes the pulsations are loud, and clear, and regular, at others, they are faint and intermittent; now a distinct throb or several, and then a tremulous flutter, or a quick beat, like the wings of a confined bird, flapping against the bars of its prison. When there is violent throbbing of the heart, which may be felt by a hand pressed upon the chest, while the patient is himself unconscious of it, there is reason to apprehend organic disease; but when there is such acute consciousness, as we have described, there is generally only functional or nervous derangement, without any structural change. A disordered stomach may be the cause, although there may be no other symptoms of this: we have known cases in which a very slight irregularity in the mode of living has produced Palpitation of the Heart, and that too, in an otherwise healthy person. In some, almost any strong nervous stimulant will produce it, and we recollect one instance in which it always came on after a cup of tea, and was never troublesome when this beverage was not taken: we mention this to show that Palpitation is not always, nor indeed commonly, symptomatic of Heart disease; and need therefore cause no unnecessary alarm, although its frequent recurrence should set the patient inquiring as to what is the real cause. Young women with whom there is derangement of the menstrual functions, in whom the blood is watery and poor, wanting the red corpuscules; the listless, the pallid, the hysterical, in these we meet with Palpitation in its most aggravated forms; as also in the indolent, the susceptible, and the delicate; those who dwell on morbid fancies, and excite the imagination with sensual thoughts, or horrible pictures. To such every beat of the pulse seems like a call from the world of spirits, every flutter and palpitation like a brush from the wings of the angel of death, or the whispering voice of an accusing conscience. In these cases the only treatment likely to be of service must be directed towards removing the predisposing and exciting causes, and establishing a more healthful nervous condition—gentle exercise, tonics, change of air and scene; an endeavour to occupy the mind in some useful and moral pursuit; a well-regulated and generally frugal, although sufficiently nourishing diet; and a strict avoidance of all that can excite or stimulate either mind or body. By this means Palpitations, not connected with organic disease, may generally be got rid of. If the patient is of a full habit, and has a tolerably strong pulse, bleeding or cupping may, perhaps, be resorted to with advantage; but this should be cautiously done. In such, too, a course of gentle purgatives may be necessary; they should not be salines, but of a cordial nature, something like this.—Pill of Aloes and Myrrh, and Compound Galbanum Pill, of each ½ a drachm; divide into 12 Pills, and take one at bed-time. Compound Infusion of Senna and Decoction of Aloes, of each 3 ounces; Spirits of Sal Volatile, 1 drachm; Compound Tincture of Cardamums, 2 drachms; Tartrate of Potash, ½ ounce; mix, and take two tablespoonsful occasionally.

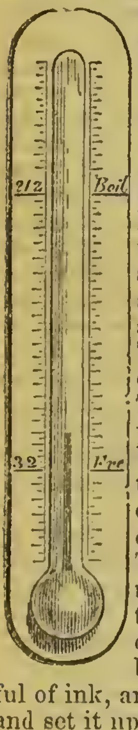
Heart-burn is a sense of uneasiness at the pit of the stomach, from whence it ascends, with acid eructations and a burning heat, into the throat. Sometimes it is accompanied by faintness, nausea, and vomiting, and commonly by what is termed Water-brash, the mouth becoming filled with a limpid fluid from the stomach, the upper orifice of which is called cardis, from its being the seat of the Heart; it is especially liable to be disturbed by any irritating causes, and such disturbance we term *Heart-burn* or *Cardialgia*. Anything which deranges the functions of the stomach will be likely to cause this—indigestible food, especially butter and cheese, or fat and oil of whatsoever kind; so also will strong mental emotion and pregnancy, in the latter months of which there is usually more or less Heart-burn. The best remedies are alkalies, combined with mild aperients, such as Magnesia, or Tartrate of Soda and Rhubarb. If there is much flatulency, Gregory's Powder, in ½-drachm doses, is good; and where the pain is great, about 5 drops of Laudanum may be taken with each dose. In obstinate cases, a leech or two, or a succession of small blisters, to the pit of the stomach, will probably be useful; but the main thing is a well-regulated and simple diet, and avoidance of the offending substances; no ale, beer, nor wine, but a little brandy and water at dinner; gentle exercise, and the treatment directed under the head of *Dyspepsia*.

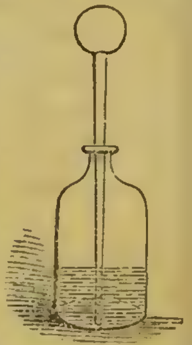
HEAT. We understand by this term, first, the sensation experienced in coming in contact with a body of a higher temperature than that of the blood: second, the cause of that sensation, or *Caloric* (which see). Into the theory of this important agent, as it affects the operation of the great laws of nature, we need not enter at all fully, our inquiry just now being directed to its action on the human system, in its different states and conditions of health or disease: as it is desirable, however, that our readers should understand something of the nature and properties of Heat, we think it necessary to give some explanation thereof.

There are two states in which we find Heat. In the one case we recognize it by the touch, in the other we cannot find it out by such means. The air has a very large quantity of Heat hidden in it, even when it seems coolest to you. It contains so much Heat, even in the depth of winter, that the quantity contained in a few square inches, if driven out, is sufficient to light a piece of tinder. We have drawn here a figure of a solid square, or cube, that we may be fully understood. Each face has four edges, as in fig. 1, and there are six faces to the solid square, as in fig. 2. Now if you had a vessel which would hold about twelve square inches or cubes of air, and could so manage as to compress it into the size of one square inch, so much Heat would be given out that a piece of tinder would be set on fire by it.



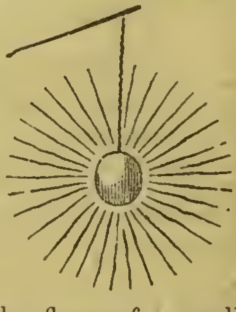
If you procure a piece of thick iron wire, and hammer the end of it on an anvil or hard stone, you will find that after a few blows it has become very hot. You have compressed the particles of the iron, and the latent, or hidden, Heat, has become sensible to the touch. The Heat kept the particles or atoms of iron apart from each other; but when you have hammered them close, your hammering will produce no more Heat. You have learned by this experiment, which any one may perform with a piece of soft iron wire, that Heat has a tendency to separate the particles of which bodies are composed, and make them larger. This separation is called *expansion*. A bar of iron, when heated, becomes longer; and hence, if the iron pieces or plates upon which the wheels of the railway engines run were to be placed in winter with their ends close against each other, they would be so expanded by the warmth of the sun in summer, that they would become crooked, and the line would be unsafe to travel upon. This expansion of bodies by Heat is taken advantage of by persons who wish to measure sensible Heat. Thermometers are constructed of bodies which are readily expansible by Heat. Those commonly in use are made of quicksilver enclosed in glass. The glass tube is mounted on a piece of bone or ivory, which bears the marks of degrees, so that the amount of expansion or contraction of the quicksilver can be stated or registered. There are various forms of Heat measurers, or thermometers, and this is how to construct a simple one. Take a wide-mouthed bottle, pour into it a tea-spoonful of ink, and two tablespoonsful of water, and set it upon the table. Having procured a glass tube, which has been blown into a bulb at one end, warm it thoroughly before the fire, and then rapidly place it in the bottle, so that the open end is plunged into the ink and water at the bottom. In a second or two the air in the round bulb of the tube will begin to contract, and the inky water will ascend the tube, and perhaps rush into the bulb. When all upward motion in the water has ceased, place your hand upon the bulb, and you will then, by warming the air inside, cause it to expand, and the water in the tube will again descend. Pure water would answer as well as the mixture of ink, but the latter is more easily seen as it ascends and descends the tube.





If you place the bulb and bottle near the fire, the air in the bulb will be expanded still further. Your thermometer just shows that Heat has been taken from the fire and combined with the air in the bulb. But how was the Heat conveyed from the fire to the bulb? By what means was it communicated?

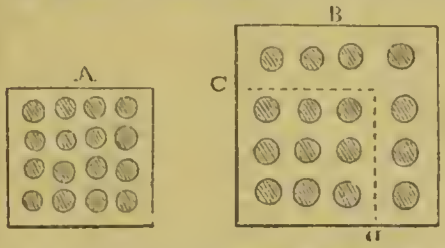
Heat is conveyed in two different manners. A heated globe of iron, if suspended in the air, would send out *rays*, or straight lines of Heat, in every direction, as in this diagram. When Heat is given off and conveyed to another body by *rays* in this manner, it is said to be by *radiation*. To illustrate the other mode in which Heat travels, hold the end of a piece of iron wire, of three inches in length, in the flame of a small taper. The *radiated* Heat from the flame you will scarcely feel, but the Heat will be speedily conducted to your fingers along the wire, which will become so hot that you will scarcely be able to hold it. When Heat is thus conveyed by a metal or other solid body from a fire or flame to any other body, it is said to be by *conduction*. Metals conduct Heat rapidly; and hence metal tools



which require to be used while hot have the handles covered with wood, which does not allow the warmth to pass from the iron to the hand of the workman. You could hold a piece of wood of much shorter length than the wire in the taper's flame, and feel no inconvenience. These circumstances prove that wood does not conduct or convey Heat as rapidly as iron; it is therefore said to be a bad conductor—in other words, its power of transmitting warmth is small. Woollen cloth is a still worse conductor; and for that reason, when the flat iron is used by the laundress, she protects her fingers with a piece of folded flannel, which does not allow the Heat from the handle of the iron to burn her hand.

You have seen how the air is expanded by Heat, and contracted by cold; it is important, moreover, to understand, that in a cubic inch of cold air there are more particles than in a cubic inch of heated air.

The figure A represents a cold cubic inch of air, which we will suppose contains *sixteen* atoms or particles, of air. If to this be applied a very small quantity of Heat, it would expand to the size of B, without any increase of the number of particles, or in its weight. A cubic inch (as indicated by the dotted lines C and C), would then only contain *nine* atoms or particles of air.



If the cold cubic inch weighed sixteen grains, the hot cubic inch would only weigh nine. If bodies are expanded by heat, they contain *fewer* particles in a given space; if they are contracted by the removal of that Heat, they contain *more* particles in the same space. Some of these particles would be oxygen and some nitrogen, always bearing the same proportion.

We now proceed to speak of the branch of it with which we are principally concerned, viz.:—*Animal Heat*, the evolution of which constantly attends the processes by which the food of man and the higher animals is converted into nutriment, so that the temperature of the body is maintained at a point above that of the medium of its existence. In the lower animals, this evolution of Heat is very small compared with that of the higher; indeed, it seems to rise in proportion to the powers of locomotion possessed by the animal, so that where the greatest muscular power is exercised, there is the greatest demand upon the nutritionary process going on in the system; this will well explain why great workers are commonly great eaters, and why the food of the labouring man is indeed sweet, hunger being the sauce that sweetens it. People who want an appetite are very properly recommended to walk or ride, or in some way to exert their muscles. (See *Exercise*).

In man the temperature of the more accessible parts of the body, such as the mouth, axilla, &c., is between 97° and 98°; in a state of health the blood is commonly about 100°; in disease, when there is an unnatural stimulation of the organs, it rises sometimes as high as 109°. This Animal Heat attains its maximum during the day, that is, in healthy persons, falling about 2 degrees during sleep; the temperature of the body is 2 or 3 degrees higher in tropical than in temperate climates, and in most of the mammalia, which live a life of great activity, it is higher than in man; while birds develope caloric in a much greater ratio than any other class of animals, in consequence of the nutritionary changes going on to support the enormous muscular power which they exert during flight.

Let us endeavour to explain how this evolution of Heat is produced by the chemical changes which take place in the nutrient fluids of the body. During the act of respiration much oxygen gas is taken into the lungs, and absorbed by the blood, in which fluid it combines with the various compounds of carbon, which formed the constituents of the food. Now we know that out of the body, when carbon and oxygen unite, an increase of heat is the natural consequence; we are therefore justified in believing that the same result is produced in the body by the union of these two gases. As the blood pursues its appointed course through the system, and gives out its oxygen, an excess of carbon is left and expelled from the lungs in the shape of carbonic acid gas, as we have already explained under the several heads of *Blood*, *Circulation*, *Heart*.

Now as there is far more oxygen absorbed into the system than passes out of it again, the probability is that this enters into combination with hydrogen, nitrogen, carbon and their compounds, which are the result of digestion, and tends to produce Animal Heat, forming, as it were, a stock of fuel for the combustion which is constantly going on more or less rapidly in proportion to the muscular exertion required. On this hypothesis we can quite account for many well-known phenomena; for example the low temperature of persons affected with *morbus cœruleus*, whose blood is but imperfectly oxygenized, and of aged and debilitated persons, with whom there is a slow circulation; such are constantly complaining of being "chilly." Friction and active exercise, again, will restore the warmth to the limb or body chilled by exposure to cold, and by inactivity, and we can well understand why this is, and also why persons labouring under attacks of inflammatory disease, in whom the blood circulates with great rapidity, should be hot and flushed. In the fœtus, and young animals born in an imperfectly developed condition, there is but little independent warmth; because the lungs have not begun to act, and draw in a supply of that which forms the fuel of the body. Animals which lie torpid for a time breathe very slowly, if at all; the consumption of fuel with them is very trifling.

Having thus explained, as clearly as we could in a small space, the theory of Heat in its relation to the animal economy, we shall now proceed to speak of it in a medical point of view; first, as to its *physiological* effect, that is, its action upon the body in a state of health; and second, as to its *therapeutic* effect, when used as a remedy for disease.

It should be borne in mind that, the sources of Heat, or Caloric, are various; there is—1st, the sun's rays; 2nd, combustion; 3rd, percussion; 4th, friction, which is mechanical action; 5th, chemical action, such as the mixture of different substances; Sulphuric Acid and Water, for example, where the particles of the two fluids have a different degree of density; and 6th, electricity or galvanism.

The effects of a high temperature such as prevails in tropical countries, that is from 80° to 100° is well known to be extremely debilitating to the system not born in, and inured to it: under these circumstances the temperature of the human body, as we have just stated, is considerably raised; there must therefore be a greater consumption of Heat, and to supply this, the demands upon the digestive and assimilative powers are increased precisely at a time when they are too languid and inert to supply the ordinary demand; hence that derangement of the internal organs which is so common to Europeans in India and other hot climates. There too, as also sometimes in our own country, during sultry summers, we witness the more immediate and marked effects of Heat in what are called sun-strokes. (See *Coup de Soleil*).

The skins of persons exposed to the rays of a burning sun, is liable to be affected in various ways, the most common being an eruption of small pimples, or vesicles filled with watery fluid; this is accompanied by a pricking or tingling sensation, and is hence, and from its cause, termed Prickly Heat. A tepid bath will, generally, alleviate the symptoms, or an application of Goulard Water, with the administration of a saline aperient to cool the system and keep down inflammatory action, to which those living in a high temperature are especially liable; hence, the greater danger of wounds, cuts, the bites of animals, or any abrasion of the skin, under such climates, and the peculiar virulence which the poison of snakes and other reptiles possesses. All fevers and other inflammatory diseases run their course more quickly, and have more aggravated symptoms in such circumstances, hence they are less amenable to remedial measures, and attended with greater fatality. Still, it is well known, that human beings can exist and enjoy good health, although exposed to constant and excessive heat, provided it be unattended with much moisture. A dry Heat may be borne and enjoyed by those accustomed to it, but with wet comes malaria, rapid evaporation, and other evil influences.

With regard to its therapeutic effect, we may simply observe that Heat may be used as a soothing application—an anodyne in fact, or a counter-irritant, and may be recommended as one of the safest and most accessible remedial agents for unprofessional persons to resort to; it may be applied moist as a fomentation, poultice, or saturated bran-bag; or dry, as in hot-water bottles, waterproof bags, and the like. Solid inelastic vessels are not so pleasant for the application of Heat as those which are yielding, and adapt themselves to the shape of the part; we should therefore recommend the employment of bags filled with heated grain, salt, bran, or some such material; but, best of all, is one of Hooper's elastic cushions, containing hot water. In all cases of severe form, such as colic, spasm, gall stone, gravel, &c., this may be applied with great advantage. When a derivative action is required, as in inflammatory pain, it is perhaps best to use the moist bran bag; its good effect in these cases, is to produce perspiration from the part, and this method combines the anodyne action of an increased temperature with the relaxing effect of the moist Heat. It should be borne in mind that in cases which require astringing rather than relaxing, Heat should never be applied; it increases the flow of blood from a wound or cut, and also the swelling of swollen parts. (See *Inflammation*, *Fomentations*, *Poultices*).

Heat is sometimes applied as a counter-irritant to the extent of cauterization. See *Cautery*.

HEATH, or HEATHER. The *Erica* or *Calluna Vulgaris*, belonging to the natural order *Ericaceæ* is a very common plant of the woodland and mountain districts of this country; it is commonly called *Ling*, and is sometimes employed in fomentations.

HECTIC (Greek *ektikos*, habitual). This term is sometimes used, like the Greek feminine, as a substantive, to denote a protracted or habitual fever; but more commonly as an adjective, in conjunction with the term fever, signifying an intermittent form of the disease, which generally occurs at the latter stages of *Consumption*, (which see); and also other diseases of a slow wasting character. In these cases, we may notice, that at about six o'clock in the evening the pale cheeks of the patient begin to mantle with a beautiful flush, generally so circumscribed in its character, that we can trace its outlines; the eyes brighten, the conversation becomes animated, and the listless languid manner, so painfully conspicuous throughout the day, is changed for a lively and vivacious air, all betokening an unnatural elevation of spirits; this may last five or six hours; then the paroxysm is over, the Hectic flush fades away, and a chill, accompanied by a clammy moisture, creeps over the whole frame; this is the herald of a profuse perspiration, which completely bathes the patient, and leaves him or her, towards morning, in a state of utter prostration. These are the *symptoms* of Hectic, which has been well called the ensign of death; it is like the glorious tinge on the autumn leaf, the sure prognostic of decay.

HEDERA. The name of a genus of plants, containing about 50 species, some of which are employed medicinally; among them are *Hedera Helix*, and *H. Terrestris*, the *Ivy*, and *Ground Ivy* (both of which see).

HEDYSARUM (Greek, *edys* sweet, and *aros* a plant). A genus of plants, belonging to the natural order *Leguminoseæ*. In it we find *H. Alhagi*, and *H. Sennoidis;* the former is said to yield the manna of Arabia, and the latter, whose name signifies Senna-like, has a root which is much valued in India, where it grows.

HELENIUM (in the Greek of Dioscorides, *elenion*). A species of *Inula* (see *Elecampane*); from which a nutritious fecula is obtained, called *Helenine* or *Inuline*.

HELIANTHUS (Greek, *elios* the sun, and *anthos* a flower). A genus of plants of the natural order *Compositæ;* our most familar example is the common Sun Flower, (*H. Annulus* which see); and the Jerusalem Artichoke, (*H. Tuberosus*)*;* whose tubers are wholesome and nutritious, but scarcely adapted for persons of weak digestion, or those subject to flatulency. On some persons, Artichokes proper, that is the leaves, act as an aperient; they should be well boiled if taken at all. Dr. Paris observes that the term Jerusalem applied to Artichokes, is a curious corruption of the Italian *gira-sole*, that is turn-sun in English, *heliotrope* in Greek.

HELIOTROPIUM (Greek *elios*, the sun; and *trepo*, to turn). The Blood Stone, so called from the red specks which appear on its green surface. It was formerly held in great estimation, as an application to the back to stop bleeding of the nose, and is still sometimes used for this purpose; although it is not more efficacious than any other cold substance.

Helix (Greek *elix*, from *elisso*, to turn about). This term is applied—1st, to the outer rim or margin of the external Ear, two muscles of which are called *Helices*, *major* and *minor;* 2nd, a coil of wire used in the application of *Galvanism* and *Magnetism* (which see); 3rd, a testaceous animal inhabiting a spiral shell; one of these is *Helix pomatia*, a large kind of snail, recommended as a nutritious food for consumptive patients; it is still found in Sussex and Buckinghamshire, having been introduced from the south of Europe by Sir Kenelm Digby for his lady, when in a decline, he having estates in these counties. See *Snails*.

Helmins (Greek *elmins*, or *elminthos*, a worm). Hence we have *Helminthagogues*, remedies against worms (see *Anthelmintics*, *Vermifuges*); *Helminthiasis*, a disease, peculiar to some countries, in which worms are bred under the skin (see *Guinea Worm*); and *Helminthocorton*, a plant celebrated for its vermifuge properties; it is generally known as *Corsican Worm Seed*.

Hellebore (Greek, probably from *elein*, to seize; and *bora*, in eating). The root of the *Helleborus Niger*, Black Hellebore, better known as the Christmas Rose, a plant of the natural order *Ranunculaceæ;* is an irritant poison, although sometimes given medicinally. Its properties are those of a hydragogue cathartic—that is producing watery evacuations—and an emmenagogue. It has been found useful in apoplexy, amenorrhœa, epilepsy, dropsy, hypochondriasis, and cutaneous diseases; it is now seldom prescribed, and certainly ought not to be given, except under the direction of the medical man. The dose of the Powdered root is from 5 to 10 grains; of the Extract, 5 to 10 grains; Tincture, 1 drachm.

There are other species of Hellebore used medicinally. The *H. Fœtidus* (Stinking Hellebore) is given as a vermifuge, the dose of the Powdered leaves being, for a child from three to six years old, from 5 to 20 grains; or a fluid ounce of the Decoction, made by boiling a drachm of the dried leaves in 8 ounces of water; there is also a Syrup, the dose of which is a teaspoonful at bed-time. This plant is sometimes called Bears' Foot.

The *Helleborus Viridens* (Green Hellebore) has been employed in America as a remedy for fevers of the typhoid class, and for some convulsive diseases of children, when attended by febrile symptoms. It is, however, a dangerous remedy, and one that we should be sorry to see much used in this country. *White Hellebore* (*Veratrium Album*), and Bastard Hellebore *(Serapius Latifoliæ*), are also sometimes used medicinally. See *Veratria*.

Helodes (Greek *elos*, a marsh). A term applied to fevers arising from marsh miasma. See *Fevers*.

Helos (Greek as above, or Latin *clavus*, a nail). A name given to the tumour formed by prolapsus of the *procedentia iridis*, a part of the *Eye*, (which see), also *Myocephalus*.

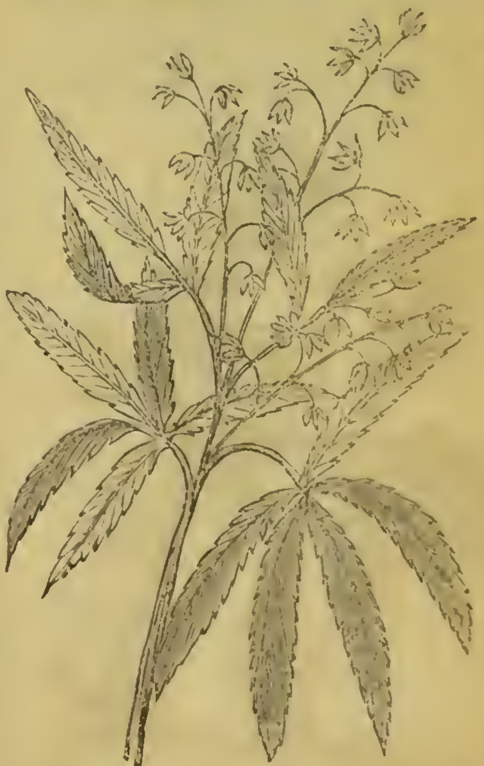
Helxine (Greek *elko*, to draw). A name given to the Pellitory of the Wall; a plant remarkable for clinging to whatever it touches, hence the above name. See *Pellitory*.

Hemedesemus Indicus. Indian Sarsaparilla. The fragrant roots of this plant are used in Madras as a substitute of Sarsaparilla, under the name of Country Sarza. It has also been introduced into this country, and obtained some attention. It is supposed to be useful in affections of the mucous membrane generally, and to possess the sudorific and alterative properties of *Sarsaparilla* (which see). There are three forms in which it is usually administered—viz., Decoction, take a wineglassful three times a day; Syrup, 1 to 2 ounces; and

Infusion, 2 ounces; the latter should be taken with Lime Water.

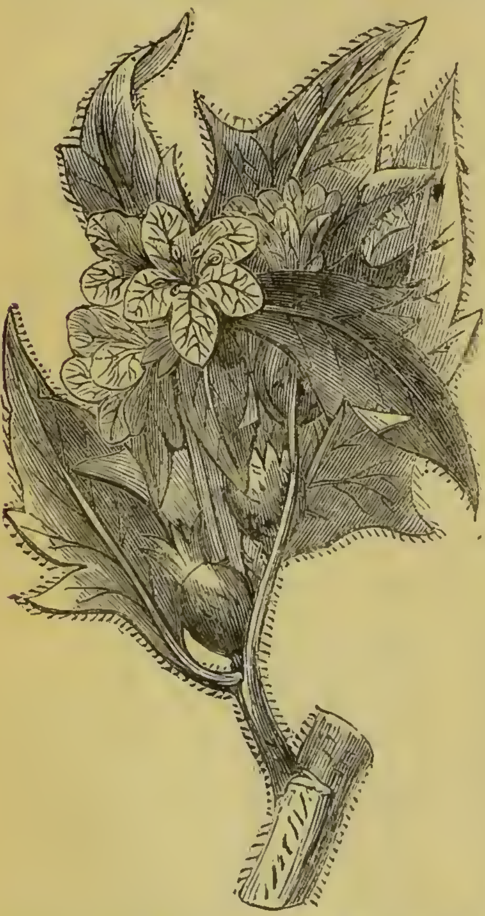
HEMLOCK. The *Conium Maculatum*, or Spotted Hemlock, is a plant of the natural order *Umbelliferæ*, and a powerful narcotic poison; this principle residing chiefly in the leaves and seeds: it is common in many English counties, and is believed to have yielded the state poison of the ancient Greeks, by which Socrates and others were put to death. The roots are said to have, when boiled, very much the taste of parsnips; but we should not recommend any of our readers to make a meal of them, as it is likely that, in certain states of the atmosphere, or conditions of growth, that they too may be poisonous. We give Conium as an anodyne, antispasmodic, and deobstruent; but in scirrhous and cancerous diseases, only as a palliative; also in pulmonary irritation, hooping cough, neuralgia, chronic rheumatism, and all cases in which sedatives are likely to be of service; in skin diseases and enlarged viscera, too, it is given, and several other diseases. The dose of the Leaves, dried and powdered, is 2 or 3 grains, gradually increased until slight nausea, or giddiness, is produced; of the Extract, from 2 to 3 grains, once a day, increased as above; of the Compound Pill, from 3 to 5 grains two or three times a day; Tincture, from 20 to 40 minims. There are two other preparations of this plant, but they are very rarely employed. The Ointment and Plaister are anodyne and resolvent, and the dried leaves, mixed with a carrot or other poultice, and applied twice a day, corrects the fœtor of a cancerous discharge in a very short time, and alters the discharge into a salutary pus.

The activity of Conium is much diminished by acids; hence, in a case of poisoning by this plant, Vinegar would be a good and easily procured remedy; of course, the stomach should be relieved of as much of the poison as possible by emetics. As a proof of the poisonous nature of the plant, we may mention that, during the present year, a boat's crew of men from H.M.S. "Wellington," while on shore at Cambeltown, dug up a quantity of Hemlock, which they mistook for wild celery or parsley. The men who partook of it—eight in number—became very ill, and two of them died.



HEMP, or INDIAN HEMP. Botanical name *Cannabis Sativa*, well known for its narcotic properties. The Hindoos prepare from it an intoxicating liquor called *Banga;* and a similar beverage is taken by the Turks under the name of *Malach;* the Arabian name for which is *Hashish.* The Hottentots also use it for the purpose of intoxication, calling their liquor *Dactin;* and in Nepaul, *Cheris* or *Cherris* is the name of a most powerful gum resin, which is said to be obtained from a variety of this plant. See *Cannabis Indica.*

HENBANE. The botanical name of this plant is *Hyoscyamus Niger*, derived probably from the Greek *yos*, a hog, and *kyamos* a beast, so named either because hogs eat it, or because it is hairy like swine; by some it is called Hogbean, *Faba Suilla;* it belongs to the natural order *Solanaceæ*, and is a strong narcotic poison, the leaves and seeds being chiefly used for medical purposes; the latter are the most active. There are two cultivated varieties of this plant, one annual and the other biennial, the latter is considered the most active. In this country the plant grows wild on waste and ruinous places; it appears to prefer a chalky soil, and is sometimes found on cliffs by the sea side; it is commonly about 3 feet high, with a hairy stem, and large deeply indented leaves of a dull sickly looking green. It bears, from June to August, dull yellowish white blossoms, thickly marked with purple lines; it has a peculiarly fetid and unpleasant odour. Notwithstanding Pliny's dictum that "all Henbane is of the nature of wine, and is therefore offensive to the understanding;" this plant is much used in modern medical practice, as it is found to allay pain, and subdue nervous excitement without confining the bowels, and acting otherwise prejudiciously, as Opium often does: in irritable affections of the lungs, bowels, and other organs, its sedative properties render it extremely valuable. The dose of the Powdered Leaves, is from ½ a drachm to 2 drachms; of the Fresh Juice expressed and preserved, from ½ a drachm to 1 drachm; of the Tincture, ½ a drachm to 2 drachms; of the Extract, (the most common form of administration), from 3 to 10 grains. There are also Cataplasms, Plaisters, and Oil of Hyoscyamus, intended for external use. In over doses, Henbane causes delirium, coma, and death, and its operation is in general very rapid. (See *Poisons*).



The Seeds sometimes relieve toothache; the best method of use, for this purpose, is to heat a small piece of metal nearly red hot, and placing them on it, let the fume which arises ascend into the open mouth; taking care not to inhale too much of it. See *Narcotics.*

END OF VOL. I.

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